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Keeping Bees Near the Blossoms.
G. M. DOOLITTLE.

Colorado Convention Report.
H. C. MOREHOUSE, Sec.

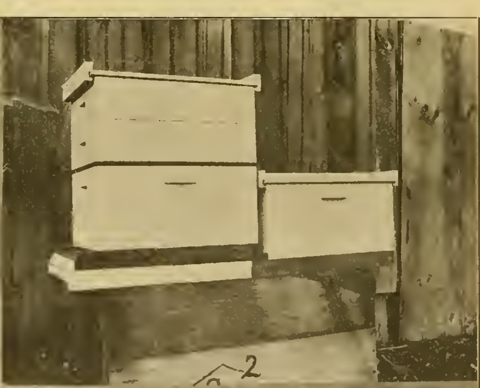
AMERICAN BEE JOURNAL

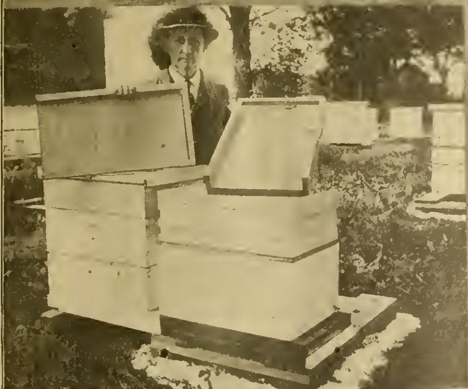
Published Weekly by GEORGE W. YORK & CO., 144 & 146 E. Erie Street.

44th Year. CHICAGO, ILL., JAN. 7, 1904. No. 1.

W. C. Lyman's Apiary, Home and Swarming Management.

(See Page 6.)





1. Apiary of W C. Lyman. 2 and 3. Three-Bottom-Board Plan of Handling Swarming. 4. Mr. Lyman's Home, in Du Page Co., Ill.

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In addition to the above mentioned we have hundreds of others who handle our goods in large or small lots, some of them handling specialties only, like Root's Cowan Extractor, Root's Weed Comb Foundation, etc. When you want standard Bee Supplies place your order with any of the agents or branch houses mentioned on this page, or write our home office for name of agent nearest you.

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GEORGE W. YORK, Editor. CHICAGO, ILL., JAN. 7, 1904. Vol. XLIV—No. 1.

Editorial Comments

Volume Forty-Four Begins.

The American Bee Journal, with this issue, begins its forty-fourth volume. In a few years more the half-century mark will be reached. In its first eight or ten volumes it had two editors, and in its past thirty or more it has had only two. While not its editor except during the past twelve years, for nearly twenty years we have been closely connected with its publication; that means for almost half of its entire existence. It seems quite a long time. Especially so when one thinks of the many changes and advances made in the pursuit of bee-keeping during that length of time.

While it has been the American Bee Journal's aim to keep in the vanguard of progress, it does not claim to have done all that has been done. It has helped. It will continue to help. It will try to make the year upon which it now enters—its forty-fourth—the best and most helpful year of its whole existence. It is in a better position now, in every way, to do better work—to be of more value than ever before to its readers.

The American Bee Journal's friends and supporters have grown with the years. It has become in thousands of homes a welcome weekly visitor. We are often told in most appreciative and grateful words of its helpfulness to those who have read and studied its contents most faithfully from year to year. We rejoice that it is so. It goes far to brighten and illuminate our pathway, to know that our efforts have not been in vain. It will also be an encouragement, perhaps, when we say that without the loyal and enthusiastic support the American Bee Journal has had throughout the passing years, we could not have carried out our part of the program. So we are each dependent upon the other. No man liveth to himself.

It is our aim to make this forty-fourth volume of the American Bee Journal the very best of all. We can not do it alone, but with the hearty co-operation of the reading, wide-awake, progressive bee-keepers of this and other lands, we know that success can be conquered—be compelled to companionship with the old American Bee Journal.

Four-Piece vs. One-Piece Sections.

The danger that basswood lumber will become so scarce that it can no longer be used for making sections, is not viewed with any great degree of alarm by those who prefer four-piece to one-piece sections. Editor Hill says in the American Bee-Keeper that he would rather pay full price for four-piece sections than to receive the one-piece kind as a gift, and James Heddon is still more emphatic, saying in the same paper:

"I have gone through every phase, with sections, allotted to the bee-keeper, and, oh, horror! I would not accept one-piece sections as a gift if a $10 bill was presented with every box. I have found more objectionable features connected with them than I had any idea existed. I wonder that they are in use at all. They glue up far worse than the four-piece with their entire open top. They are soft, soaking honey, and daub and stain much more easily than the white poplar. They do not come into square position when put together. Some are stained, and others are loose. They will not bear cleaning with water when a little honey drops on them, as will white poplar. They are a miserable thing to handle in and out of cases and shipping-crates, and it is only a trifle faster that they can be put together than the four-piece sections. I want no more of them, and I can not conceive that a basswood one-piece section (and no other kind of wood seems fit to make them of) can much longer satisfy American bee-keepers. Good-bye, one-piece sections for James."

If, perforce, we must go back to four-piece sections, we may as well take all the comfort we can out of the advantages they offer. They can be made of any kind of wood, and no one pretends that basswood is the best lumber for sections where no bending of joints is needed. It is true that a one-piece section that is not square can be made square, but it will not stay square unless rigidly held so, while a four-piece section stays square of itself. There is generally danger of breaking some sections in putting together one-piece sections unless the joints are wet, and it is extra trouble to wet the sections aside from the danger of discoloration from wetting. This breakage and wetting is saved when using four-piece sections. Besides the breaking when folding sections, there is the breaking that sometimes happens after the foundation is put in, which is worse, and very much worse if it occurs after the section is filled with honey. Four-piece sections avoid this. Possibly we may find comfort in discovering other advantages, but these are enough to show that the change, if the change must come, will not be an unmixed evil.

"The Rival of the Bee."

This, in large type, is the heading of a full-page three-column advertisement we saw in one of our exchanges recently. To make it more deceptive, at each end of the head-line is the picture of a straw-skep. The first column of the wonderful, rivalling stuff started off like this:

> "*Words sweet as honey from his lips distill'd.*"
> —ILIAD OF HOMER.

Long has the honey of the bee reigned as sweet of sweets. Homer, Milton, Shakespeare, Tennyson and others of the poets made tribute to its sovereignty, using its name as the superlative of sweetness.

When these men wrote, and until a recent day, the industrious bee toiled on without a rival.

But twentieth century skill and science came upon the field to wrest from the bee his laurels. Man went to Nature, even as the bee does, but with better equipment. Only the blossoms, with their mites of sweet, are open to the bee for his sources of supply. Man may go where the store is richer though more strongly guarded.

So he drew upon the King of Nature's cereals, corn, and made therefrom a syrup clear and golden as the honey of the bee; richer in nutriment, sweeter in flavor, less in cost.

And when this syrup is placed where the bee may have access to it, he forsakes the roses and the clover, mutely acknowledging his vanquishment, and making the triumph of man complete.

This wonderful syrup, extracted from the golden grains......is meeting with a warm welcome from the housewives of America, won by its purity, flavor, nutriment, and low cost.

It is being used in place of honey and other syrups on griddle cakes and as a spread—because it is "better than honey for less money." It is being used instead of molasses in baking and candy making, because it is purer, more nutritious, and more digestible.

How eloquently beautiful that is! Then think how goes "the bee for *his* sources of supply"—the blossoms. But when *he* (the bee) finds this great "rival," "*he* forsakes the *roses*," etc.

It is safe to say that the chap who wrote the nonsense quoted doesn't know any more about the genuine honey produced by honey-bees than he does concerning the flowers from which it is gathered; and, also, he seems not to know that the *he* bees do not gather nectar at all.

But just for our own satisfaction we asked Mrs. York to buy a 10-

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cent can of this great "rival of the [he] bee," so that we might personally know about what is "better than honey for less money." We pride ourselves on having a fair taster for sweet things. But to call the stuff we got (a mixture of corn-syrup and cane-syrup) "better than honey for less money," proved clearly to us that the one who wrote those rhythmical words must have had in mind a poor grade of honey-dew, or amber honey spoiled by overheating. It tasted more like New Orleans molasses. He certainly never tasted the fine white clover, alfalfa, basswood, sage, or other fine bee-honeys with which to compare his glucose product.

To be sure, we got about a pint of the stuff for 10 cents. Yes, it's cheap. Everybody knows that glucose is cheap.

We doubt not some good people will believe the catchy advertisement, and buy a sample of "he-bee molasses," thinking they are really getting something better than genuine honey-bee honey. After sampling it, we think they would agree with us, that if the fixed-up glucose is "better than honey," we surely wouldn't want either the corn-syrup or genuine honey.

But we doubt if many people can be fooled into investing very heavily in this "he-bee molasses."

Does Deliquescence Increase the Weight of Honey?

"York County Bee-Keeper" says in the Canadian Bee Journal:

> "From my limited observation I am led to believe that honey does not to any appreciable extent increase in weight by addition of moisture attracted to it. Perhaps there is some chemical inversion of the component parts of honey, such as the saccharine matter being turned into water or something of like nature."

This writer is not alone in the view that there is no appreciable increase of weight by addition of moisture, although, perhaps, not all would express it in exactly the same way, for there is a manifest contradiction in addition of moisture without increase of weight. The real question is whether there is a real attraction of moisture or merely a change of some kind in the honey itself without any actual addition.

Is there any ground for the belief that there is no real addition of moisture from the atmosphere? It would not be a very difficult thing to weigh a quantity of honey before and after the change, and that ought to decide in a very positive manner whether there is an actual increase of weight. In the meantime it may do no harm to attempt to clear our views by a little reasoning.

If there is no real addition from the atmosphere, how is it that a can of honey hermetically sealed will not attain the watery condition? Or, how is it that such condition will not be attained in a dry atmosphere, no matter how open the vessel of honey? Or, how is it that when honey is changed from a moist to a dry place it becomes thicker, then thinner again when changed to a moist place, a change occurring just as often as the change is made from one place to another. Do chemical changes alternate in this way?

Every bee-keeper may have observed that when a comb of sealed honey is left long enough in a damp place, the air-space between the cappings and the honey disappears, the space being filled with honey. Still later the honey oozes through the cappings and runs down in drops over the face of the comb. There can be no question as to the increase of bulk, can there be any as to the increase of weight?

Very likely, when the actual test is made it will be found that no change whatever takes place except the addition of moisture from the air, and that the increase of weight will correspond exactly with the amount of moisture thus added.

Miscellaneous Items

Mr. E. B. Huffman, of Winona Co., Minn., died of consumption on Dec. 4. He was 78 years old. He was a strong friend of the old American Bee Journal. So one by one they are passing away from earth, and others must take up the work.

* * *

Dr. Miller's Report for the season of 1903, is as follows:

> MR. EDITOR:—In the very interesting report of the General Manager of the National Bee-Keepers' Association, I see I am put down as having harvested the past year 14,000 pounds of comb honey. I think that report was given to him during the convention at Los Angeles, and it was about as near a guess as I could make at the time. But while I was fooling around California, my assistant was having a very busy time gathering in the rest of the crop, and my full report is this:
>
> From 124 colonies I increased to 284, and harvested 18,466 pounds (20,051 sections) of honey.
>
> Giving particulars: 100 colonies run for honey gave 184⅜ pounds (200½ sections) per colony, and 24 colonies run for increase gave 666 percent increase.
>
> C. C. MILLER.

Let's see, Dr. Miller is over 72 years of age, and he has just had his best season with the bees. Conundrum: If Dr. Miller lives say 50 years longer, how large will his best honey crop be next time? His answer would likely be: "I don't know!" Neither do we.

* * *

Christmas Greenery is the title of an article written by Hon. Eugene Secor, of Winnebago Co., Iowa, and published in his local newspaper, the Forest City Summit. It is a most interesting literary production on the origin and use of evergreen decorations at Christmas-time. Mr. Secor doesn't seem to lose any of his old-time eloquence and descriptive power as the years come and go. May the memory of him and his be ever green in the thoughts and hearts of those whom his brain-children delight and uplift.

* * *

Mr. H. C. Morehouse, secretary of the Colorado State Bee-Keepers' Association, writing us from Boulder Co., Colo., Dec. 24, had this to say about the wintering of bees in that State:

> Up to date bees have wintered magnificently in Colorado. The weather has permitted frequent flights, and while the consumption of stores is heavy in consequence, the bee-keeper will hardly regret it, since the bees are in No. 1 condition. The ground is now covered with snow, and to-morrow will be the first white Christmas in nine years.
>
> H. C. MOREHOUSE.

* * *

Tin-Can Prices Canceled.—We have received the following notice from Mr. France:

> The Annual Report of National Association for 1903, on page 53, gives prices of tin honey-packages. I wish to state that those prices will not be granted any longer.
>
> N. E. FRANCE, *Gen. Mgr.*

Mr. France sends us a further financial statement on the Annual Report and Voting Ballots as follows:

2200 copies Annual Report for 1903 and mailing same	$142 00
Less advertising in the Report	66 00
Total cost of Report to Association	$76 00
1680 Voting Ballots, printed on both sides	$18 50

* * *

Patronize Our Advertisers.—We take considerable pride in the extent and character of the advertisements in the American Bee Journal. We have every confidence that all our advertisers are entirely reliable, or they would not be permitted to appear in these columns. Hence, we feel like inviting all our readers to patronize them whenever it is to their interest to do so.

And please do not forget to mention, when writing, that you saw the advertisement in the American Bee Journal. It will help both the advertiser and us if all will kindly do that.

By the way, there are a great many more of the smaller bee-supply dealers, queen-breeders, etc., that should be represented in our advertising columns. Our rates are very moderate, and can be had on application.

* * *

N. B.-K. A. Stamp.—Alfred Atherton offers the following for consideration:

> One suggestion I would like to make: When I was preparing my honey for market this fall, if I could have had some sort of stamp bearing the letters "N. B.-K. A.," perhaps it might give the commission man a little more respect for the rights of the shipper.
>
> ALFRED ATHERTON.

We should very strongly oppose the use of such a stamp until some sort of provision is made to prevent frauds getting into the membership of the Association. Unless such a stamp were rigidly safeguarded, it would be of no value to any one.

The fact is, the Association is not organized for the purpose of doing all kinds of business. We think it has enough to do when it simply keeps within its legitimate lines of work.

* * *

Mr. H. J. Mercer, a member of the California National Honey-Producers' Association, called on us last week. He is quite enthusiastic over the prospects of the great value that Association is proving itself to be to its members. It has done wonders already in helping to keep up the price of California honey. At least one of the heretofore honey-dealers in San Francisco, who thought he could do as in former years, has become a wiser if not a richer man. He sold

15 car-loads of extracted honey, ahead of the season, at 4½ cents a pound. When he came to buy the honey to fill his order, he had to pay 5 cents a pound. He will know better next time.

Mr. Mercer says the Association expects to be in a position another season to furnish certain lines of bee-supplies to its members at greatly reduced rates. Keep an eye on those California folks. They are out to do business. With the bee-keepers of Colorado, and California, and Texas, organized to accomplish results, something worth while may be expected. Success to all of them. They are on the right track.

Sketches of Beedomites

DEATH OF WM. R. GRAHAM.

Wm. R. Graham died at his residence in North Greenville, Tex., Nov. 27, 1903, in the 76th year of his age.

Mr. Graham was born Jan. 14, 1828; his wife, who was Miss Eletta Poteet, was born June 5, 1830; they were married April 3, 1851. They were born, reared and married in Lee Co., Va., where they resided until they came to Greenville, Tex., in 1874.

When the Civil War broke out, Mr. Graham enlisted in the Confederate Army.

WM. R. GRAHAM.

Shortly after coming to Texas he became interested in scientific bee-culture. He was the prime mover in the organization of the Texas State Bee-Keepers' Association, which was organized in 1877. Mr. Graham was the first president. The late and lamented Judge W. H. Andrews, of McKinney, Tex., was elected president in 1878, which position he held up to the time of his death in 1887, when Mr. Graham was again elected president. In 1891, the late Rev. W. K. Marshall, of Marshall, Tex., was elected president, and held the office up to the time of his death. In 1895 Mr. Graham was for the third time elected president of the association, which honor he bore with distinctive pleasure and pride up to the time of his death. Outside of three meetings held at Judge Andrews' residence, in McKinney, all of the conventions have been held at Mr. Graham's home in North Greenville. This association is now the oldest organization in the State, being 26 years old, and has never missed a single annual meeting. The writer is the only original charter member living.

The writer, in 1880, established, on a small scale, a manufactory and sale of bee-keepers' supplies a few miles northwest of Greenville, which soon grew to such proportions that it became necessary to move it to Greenville, where, in 1884, in company with Mr. Graham, it was enlarged to supply the increased demands. Mr. Graham, the same year, became sole proprietor, and the following year erected at his home suitable buildings for his business. His popularity as a practical bee-keeper and a home manufacturer increased the demands, so that in 1893 he built and equipped a large factory, to which was later added machinery for general work; this was operated under the firm name of W. R. Graham & Son. This is the oldest and largest establishment of the kind in the State.

In the death of Mr. Graham the Texas State Bee-Keepers' Association has lost an honored president and faithful worker, the community a valuable citizen, each personal acquaintance a noble brother, and his family a devoted companion and loving father.

W. R. Graham was an exemplary Christian and lovable character from his early life. For the last three years he was an invalid, for nearly a year entirely helpless. Through all of his afflictions he never murmured; he patiently awaited the final summons, often praising the Lord; he passed away without even the appearance of a frown, to that peaceful sleep of the just.

Mrs. Graham is now 73 years old, and in good health for one of her age. During her 53 years of married life she has lived to see her children grow up to useful men and women, and become honored citizens. While death has claimed her dear companion and four of her children after arriving at mature age, she has yet five children to make her remaining days less lonely, and her burdens lighter. The surviving children are: Mrs. H. L. Russell, Wm. M. Graham, John E. Graham, Marion R. Graham, and Mrs. J. W. Morrow.

WM. R. HOWARD.

It was our good fortune to meet Mr. Graham at the National convention of bee-keepers in 1893, during the World's Fair in Chicago. He was an ardent friend and continuous subscriber to the American Bee Journal for many years. We are glad to give space here for his picture and biographical sketch. The old leaders in bee-keeping are fast passing on. May their equals succeed them in their beloved pursuit of bee-keeping.

Contributed Articles

Keeping Bees Near the Blossoms.

BY G. M. DOOLITTLE.

SOME six or eight weeks ago a correspondent wrote me that he had not seen anything from my pen in the American Bee Journal of late, and wished I would write again, sending along a question on which he desired my opinion in the paper mentioned. As I was too busy then to answer his questions, and as they would keep, I have deferred the matter till the present time. The question sent in is as follows:

> "I must change my abiding place during the coming winter, and I desire to locate my apiary about a mile and a half from the thickest pasturage of the vicinity to which I am going; but I am undecided what to do for fear my bees will not do nearly as well as they would if I sacrificed my own convenience and moved right in among the flowers of the best bee-pasturage. What would be the difference, if any, in the quantity of honey gathered from a certain field of clover, basswood or buckwheat, if my apiary is right among the blossoms, or from one to one and a half miles away? Please tell the readers of the American Bee Journal what you think in this matter."

Some claim that a colony whose bees all have traveled one or two miles from home for their stores will soon become depopulated, the result being a half less honey, with very weak colonies in the fall, over what would accrue had the apiary been located right in the midst of the flowers. Others claim that every young bee that enters upon the service of field-worker must learn where the best forage-grounds are before it can work to the best advantage; while theory claims, in view of the fact that bees do not know instinctively how to go directly to the nectar-bearing flowers in the vicinity of their homes, but must depend upon their smell and an industrious search for profitable honey-gathering, that therefore it stands to reason that less time would be lost in getting the whole force at work on the honey-producing flowers, where the latter are plentiful *very* near the apiary, than would be the case if the pasture were from one to two miles away. Probably no one could give a very definite answer to the question without trying the experiment with a number of colonies right in the midst of the blossoms, and an equal number one or more miles away, for a number of years; and this is something that I have never done, therefore I cannot be considered as authority in this matter. I can only give my experience, which the questioner and others can take for what it is worth.

My experience would indicate that those who argue that bees must be set right down in the very center of the honey-producing flora do this more from theory than from actual knowledge; for I am led to believe that there would not be enough difference in the results, at the distance named, to pay for moving the apiary up to the bloom during the time of the blooming of the flowers, and back again for the rest of the year. From many times of watching at the top of a hill near my apiary, over which the bees pass, I find that they fly very rapidly when from one-fourth to one-half mile from the apiary, and the exercise seems to be invigorating; and if those who argue depopulation of the hives when the bees have long distances to fly, could be here in years when the bees work on basswood from four to eight miles away from home, following the flow back and up to the top of the high hills, as the bloom fails here at home, and then further and further away, and see how the honey in the sections grows as if by magic, with hives gaining in number of bees while this work is going on, I think they would incline to the same opinion I do, namely, that the claims which they have been putting forth are only fallacious.

From this experience of mine, and the many proofs given in the back volumes of the different bee-papers, I am convinced that bees go from one to three miles from home for nectar, from choice, during the summer months, during which months the larger part of the storing of honey is done; and if I were in the questioner's place I would not give to the amount of ten dollars in sacrifice, in changing a position a mile and a half from the honey-flora to one right in its midst.

A few years ago it rained all through the apple-bloom, while it was at its height at my home, which is situated in a valley, the rain stopping only about a day before the bloom fell here. At the same time the bloom was just opening on the hills five mile away, and the orchards in the intermediate or intervening space were all the way from just failing in bloom to just opening. The weather now became fine for nectar-secretion and the bees began to roll in the honey, and kept right at it day after day till the bloom failed on the hills, the farthest being eight miles away. And I thought the yield was even greater, if possible, when all bloom was gone up to four miles away, than it was during the first three days, when the bloom was nearer the apiary.

Then I have had good crops of buckwheat honey stored when there was not a square rod of buckwheat in sight of the apiary, and not to exceed 13 acres within the distance stated by the questioner (a mile and a half), while hundreds of acres lay from three to five miles away.

These experiences, together with having tons of basswood honey stored from the top of the heights seven or eight miles away from my apiary (these same being those from which the apple-blossom honey was gathered as spoken of above), during the past 30 years, lead me to think that the center-location parties are not entirely sure of the premises they have taken.

Of course, where one could have things just as he would like them, a location in a valley full of honey-producing flora together with rising hills on either side, the same being covered with all manner of nectar-yielding flora clear to their summits, the summit of which would be from one to eight miles away, would be the much-desired location for the person who is to keep bees for a living. But as it is impossible for all to enjoy such a location, and as other environments are likely to enter into any location in which we are placed, or must be placed on account of our own welfare, or the welfare of those whom we love and wish to help to a schooling or a business, or something of the kind, it is well to accept the situation as it comes to us, and not be stampeded from it by the "scare-crow" of the thought that it is positively necessary that flowers must be in abundance right where we are located. Onondaga Co., N. Y.

Three-Bottom-Board Plan of Handling Swarmimg.

BY W. C. LYMAN.

I HAVE been using, during the past season to some extent, a method of handling bees during the swarming season and honey-flow which might be called the "three-bottom plan;" and I will say first that the bottom-boards used were the B bottom as sent out by The A. I. Root Co. the past season, excepting that the side-pieces on both sides of the board on which the brood-chamber rests extend the full length of the board instead of being cut the length of the brood-chamber only.

The illustrations given on the first page will help to make my description plain; and the one showing a hive and brood-chamber resting on three bottom-boards is the one I wish to describe. The hives were set up on a large box for the purpose of taking the picture.

The illustration in which I am shown holding two parts of a bottom-board on top of the hives, shows another form of bottom-board used for the same purpose, and which is similar to the Miller bottom-board, but as it is more expensive, and no better, I would not recommend it.

The whole idea is to hatch out brood in a rear hive, and to run the bees under the bottom-board of a front hive and unite them with the bees in the front hive at the entrance. I accomplish it as follows:

When the time comes to make a shaken swarm I go to a hive and move it back on its stand (I use the Dr. Miller stand), letting the front end rest on the back edge of the stand, and rest the back end on bricks to hold it up in place; and on the stand in front of it I put another bottom-board with its *open end* tight up against the front end of the one moved back. On this one I put a third and this I draw back just far enough to leave a ¼-inch crack at the front end of the two, so that bees can pass under between them, and come out at the front.

On this third board I put a brood-chamber prepared as for a shaken swarm, and the honey-board and supers, with what bees may be in them, from the hive moved back.

I have now only a brood-chamber containing bees, queen, and brood, on the rear bottom-board. I next find the queen and put her, and also a few bees, into the front hive. There will be a small space over the front end of the rear bottom-board, between the two hives, left open. This I close up bee-tight with a small piece of board. No bees can now get out from the rear hive except by running the length of the hive in front, and out at the little crack left between the two bottom-boards in front.

I don't want the field-bees to find that little entrance to the rear hive, so I take a three-cornered stick as long as the bottom-boards are wide, with the lower edge ⅞-inch thick, and running up to a *sharp edge* just on a level with the floor of the upper board, and put it on the projecting end of the lower board, leaving a bee-space between it and the front edge of the upper board, for the bees from the rear hive to come up between to the level of the upper bottom-board. When they get there they are right at the entrance of the front hive. The hive is now as shown in the cut, and this season's experience indicates that only steady work need be expected from that colony for at least three weeks, and nothing need be done with it but to give needed room.

For the first few hours there will not be so many bees in the front hive that they will swarm out, and there are no "*babies*" (very young bees) to bother as with a shaken swarm, for they won't come out from the rear hive until they are old enough to fly.

The old brood-chamber being placed directly behind the new one does not distract or take the attention of the field-force as is the case where two hives, or brood-chambers, are placed side by side. This I first observed when using the Heddon method of preventing after-swarms.

There is nothing on top of either hive to prevent the free and easy manipulation of either.

The hatching of young queens in the rear hive made little or no difference, but I think it would be better to cut out the queen-cells made there unless they are wanted for use.

Some bees return to the rear hive, and I think it is best for them to do so, but in no case was any honey stored there.

I am aware that it takes time to test new plans, also that this plan is similar to some older ones, but slight changes sometimes make quite a difference, as I think will be found in this case.

If there are cold nights when the brood in the rear hive is nearly hatched out, it would be well to look after it.

After three weeks, when the brood begins to hatch freely in the front hive, if the honey-flow still continues, the bees may swarm unless looked after.

And, lastly, if the season is a long one, and the process of moving back the brood is repeated to give the queen room, one may get quite a new idea of what a good queen can do at producing bees, and what the prospect is of breeding up a race of non-swarmers. Dupage Co., Ill.

Our Wood Binder (or Holder) is made to take all the copies of the American Bee Journal for a year. It is sent by mail for 20 cents. Full directions accompany. The Bee Journals can be inserted as soon as they are received, and thus preserved for future reference. Upon receipt of $1.00 for your Bee Journal subscription *a full year in advance*, we will mail you a Wood Binder free—if you will mention it.

Convention Proceedings

THE COLORADO CONVENTION.

Report of the Proceedings of the Colorado State Bee-Keepers' Convention, Held in Denver, Nov. 23, 24, and 25, 1903.

BY H. C. MOREHOUSE, SEC.

The first day of the convention was devoted almost exclusively to the business interests of the Association.

The report of the Treasurer showed no funds on hand since the payment of the expenses of the joint meeting of this Association and the National, in 1902.

The Secretary's financial report showed total receipts since the last annual meeting of $51.00; total expenditures $49.25, leaving a balance to the credit of the Asssociation of $1.75. The Secretary is allowed a salary for his services of 20 percent of the membership receipts, but on account of the financial condition of the Association, he presented no bill for salary.

PRESIDENT HARRIS' ADDRESS.

I congratulate you to-day, in this our twenty-fourth annual convention. When we look at the wonderful resources of our State, we should feel proud that we live within its boundaries. We are first in precious metals, first in the great sugar-beet industry, first as to climate, perpetual sunshine, and God's greatest blessings, health, happiness, and prosperity. When we look at our immense interests, coal sufficient to supply the world, cattle on a thousand hills, gold, silver, and lead not yet developed, manufacturing, agriculture, horticulture, apicultural and the other diversified industries, and all of these industries yet in their infancy, we can all proclaim what a great future Colorado has before her.

Many of you may not be aware of the great honey-industry of the United States, but from reliable source the production of comb and extracted honey and beeswax exceeds $25,000,000 a year. Our own State alone, with a fair crop, will produce about 100 car-loads. or a net price to the producer of something over $300,000. When you take into consideration the possibilities of irrigation in this State, and the many ditch enterprises now in contemplation, the interests of the horticulturist, the farmer and the bee-keeper can be added to tenfold.

In the near future, on the Western Slope, there will be put under irrigation between one and two hundred thousand acres of land, with water in abundance to irrigate every foot of this soil. It may not be out of place at this time to state that when the fruit season shall have closed the great Grand Valley, and the western slope of the Gunnison, will have shipped 1200 cars (a conservative estimate) of peaches, pears, apples, cherries, plums, etc. We should make known to the world that there is still room in Colorado for thousands of families, and locations that can be gotten without intruding upon the rights of any one.

I would call to your attention the pure honey law that was passed at the last session of the Legislature, and give proper recognition to those who assisted in getting this law where it rightfully belongs on the statute books. I would have you remember the Colorado Honey-Producers' Association, that has done much to equalize and protect our interests throughout the State. We should also be mindful of the courtesies and kindness extended to us by the officers and members of the Denver Chamber of Commerce.

I would bring to your minds the matter of the World's Fair at St. Louis next year. We should have an exhibition there covering our industry that the Colorado people could well feel proud of.

The railroads should not be forgotten, especially those centering in Denver, for the kindness shown us in giving us a rate for our meeting.

I hope that in our deliberations we will all conduct ourselves in such a manner that will go down in history as a credit to ourselves as well as our State. This Association must not take any backward step. Let our motto ever be "Progression." Let our banner fly to the breeze with the words, "Patriotism, Justice and Honor."

Thanking you one and all for the courteous treatment at your hands as your President, I trust that we may all remain steadfast to the interests of the Colorado State Bee-Keepers' Association. JAS. U. HARRIS.

APPOINTMENT OF FOUL BROOD INSPECTORS.

Mr. Morehouse—As our foul brood law is now it is possible to appoint as bee-inspector one who is not qualified. There should be a provision in the law to guard against that. He should pass an examination before constituted authorities.

Mr. Carlzen—The inspector should send out notice when he expects to be at such apiary. People do not like an inspector to come in their absence and tear up things.

Mr. Aikin—The law is quite defective, but I don't know whether it is advisable to revise it.

Mr. Gill—I fear doing anything with the law for fear of losing all we have. Bee-keepers themselves should form a great vigilance committee to see to its enforcement.

Mr. Porter—I feel just so. It is probably better not to undertake it, but to reform our inspectors instead of the law. I have nothing against the inspectors, but they sometimes don't do the work they should. There is a tendency for them to get as many hives on their list as possible in order to draw pay. One of the worst cases I ever knew was examined by three inspectors in succession, and nothing done by them. A lot of foul-broody combs were stored in a granary. The owner told plausible stories to the inspector, saying he would clean it out, but did not. When that inspector's term expired the new inspector was told the same, and was equally inactive. So with the third inspector. Finally I went myself. The place had been re-rented, and the tenant had thrown out the stuff and strewed it all around, honey and all, and the bees had been roaring over it since October. At another place, of which the inspector had said the yard was not as good as it might be, I found brood in dead colonies standing out. Such work as that ought not to be allowed.

J. B. Adams—The great difficulty is, the inspector doesn't have a fair chance. There is too much in one county for an inspector to see to. There was a similar case in Boulder county. The man did not know he had foul brood until his bees were dead. The inspector can not fix such cases until they come before his observation, and he can not put his attention to all such cases in a whole county. In one case I notified an inspector two or three times, but I could not get him. Consequently, every season some develops.

Mr. Aikin—I am one of the bad inspectors. One day I went out inspecting, and at one place found one foul-broody colony alive, two dead recently, and one that had been dead two years. A new tenant was on the place. I asked him to take care of the matter. He said no. I said, "If you don't, I will." It was late evening, and I wanted to get home. He had a fire where he had been burning some rubbish, and I set the hives on it. Then I looked up the law and found I had overstepped it, so I took a witness and went to the owner, bought and paid for the hives, and then told him what I had done. The great majority of inspectors can't afford to leave their own bees and go out inspecting, and when fall comes it is not the right time to inspect. The one remedy for the situation is to get it in such shape that those of us who have bees won't have to leave them in order to inspect. The problem is a serious one. Really, the first thing to do is to get all the bees into the hands of practical men. A State inspectorship might be better so that the office would give a man his living.

Pres. Harris—We might get knocked out if we tried anything with the Legislature, and some man with a political pull might get the State inspectorship. If you were sure of an honest man, it would be well enough.

Mr. Gill—A State inspectorship is impracticable in Colorado. There are as many bees in Boulder county as in the whole State of Wisconsin. The best we can do is to "jack up" the inspectors. At the same time, the inspectors have done lots of good.

Mr. Rhodes—We had better not undertake to amend the law. We must attend to its enforcement ourselves. Every one knows of a source of infection. It is impossible for the inspector to do everything. There is a clause in the law which makes it obligatory on any one who knows of foul brood to report it. If, as bee-keepers, we stand up and do our duty we will make it a success.

Mr. Spencer—We have not had an inspector in our county (Boulder) for about a year, and I have been doing some missionary work myself. The owners would hardly ever fail to say to me, "Do just as you please in burning and transferring."

Mr. Porter—That is just the point where we can do good. Qualifications are not the point. A qualified man may not have the time. That mess I referred to I cleaned up myself, and now it is gone. At this time of year bee-keepers are not very busy, and can do that. But I believe that when the inspector finds a bad mess he ought to inspect.

PURE HONEY LAW—COMMITTEE REPORTS.

Mr. Morehouse—During the last session of the Legislature the legislative committee, of which I was a member, prepared a Pure Honey Bill, and were successful in getting it enacted as a law. Mr. Rauchfuss and Mr. Thompson assisted us, and as they were on the ground, residing in Denver, they can perhaps tell you more than I of the efforts made in putting it through.

F. Rauchfuss—We tried to secure as good a law for the protection of honey as could be had. We provided ourselves with copies of the pure food laws in other States in framing it, and secured an attorney to see that it was properly drafted, and had the attorney general also to correct the draft, and an attorney to push its passage before the Legislature, and secured the co-operation of bee-keepers by circulars. All this involved great expense, and some bills are still to be paid. Pres. Harris helped us by his canvassing of legislators during a visit to Denver, and Fred L. Stone, also, was very useful. Since its enactment I have had applications from various parts of the United States for copies of the law, showing that it is recognized as a good thing.

Mr. Thompson—The attorney we employed was an ex-member of the House, who had served for three terms, and was thoroughly posted on legislative routine. His knowledge saved the bill on two critical occasions. Mr. Murto, the member of the House who introduced the bill, also saved the bill, and gave other effective help. Those of us who watched over its course were made to realize thoroughly that the only way to get legislation is to stay right with it all the time, for if we do not attend to it no one else will for us.

Mr. Harris—The workers for the bill not only put in their time, but also their money. They should be remembered in the resolutions.

Reporting for the committee on Transportation, of which I am a member, we, this year, for the first time, got recognition from the railroads. We secured a half-rate from all parts of the State to attend this convention. Nothing is so marked as our getting this recognition. Bee-keepers were the only ones who got this rate. The horticulturists were not recognized. The ice is now broken, and I hope the attendance will be larger.

Mr. Thompson—Reporting for the committee on the Constitution, Mr. Lytle is the chairman, but he is not present. A year ago we had done some work toward drafting a new constitution. I made copies embodying the work done, and gave one to each member of the committee. Mr. Lytle wrote out full comments on the same, and sent them to me. I then made the type-written carbon copies, putting Mr. Lytle's corrections and additions in the margin, opposite the sections to which they referred, and sent a copy to each one of the committee, requesting them to make their comments and return within a specified time, but received no reply from any of them. Mr. Lytle and I have done our part, and it now rests with the other members of the committee to explain why they have not done theirs.

Mr. Aikin—To start with, I must state that I am not in sympathy with the movement to revise the constitution. I feel that since we have had our market association the State association is doing very well as it is. I received the copy referred to, and fully intended to answer it, but press of work prevented. If it came to a vote, I should vote against revising the constitution. The best thing to do now, is for the members of the constitution committee to get together and make a report. [Agreed to.]

Mr. Rhodes—I have been trying all the year to find the other members of the historical committee, and have only just discovered that Mrs. Booth is the chairman. I have all the matter that was furnished me a year ago.

Mr. Gill—Put that among the unfinished business.

Mr. Porter—The Arbitration committee report that no complaints were made to them the past year.

The election of officers then took place, as follows:

President, J. U. Harris; Vice-President, M. A. Gill; Secretary, H. C. Morehouse, of Boulder; Treasurer, Mrs. R. H. Rhodes; member of Executive Committee, F. Rauchfuss.

(Continued next week.)

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

FOUL BROOD—EXPENSIVE IGNORANCE.

Ignorance is apt to be expensive, and calling an inspector 300 miles to see a clear case of something else than foul brood is a plain illustration. At best, there will be some cases needing an expert to decide, but we should most of us keep well enough posted to recognize the evident something elses, as well as most attacks of the dread destroyer itself.

As to the degree of care we must exercise against foul-brood germs, I can be patient with considerable differences of opinion; but it nettles me to see the same individual hold such contradictory positions when he advises others. Consistency here, seems to me, to be a quite necessary sort of jewel. If I'm told that the hive itself, which has had foul brood in it for a year, is all right as it is, but the innocent bystander who has done nothing at all but touch the hive with his hands—his hands must be disinfected—well, I might say, "See here, mister, etc.!"

Formalin as a hope seems to be fading. Last season's experience of Inspector France would hardly encourage less capable operators to fuss with it. Page 742.

LARGER OPENING FOR HONEY-CANS.

If one can reinforce thunder with milder sounds, I'm willing to add my amen, to that voice like "t'under" calling for a honey-can that can be handled and got into better than the current one. Page 744.

SCATTERING SWEET CLOVER SEED—HONEY-BARRELS.

Some years ago a well known Western bee-man owned up to scattering sweet clover seed; and now Mr. Pouder confesses, also. Two guilty parties, eh? But when he tells of the poor-flavored honey, and the greenish tint, and the lack of any surplus nine years out of ten, it reminds one of an old saying. They used to say a sinner would work harder to get to the bad place than the saint works to get to Glory. Does that about fit us? Haven't we been sowing ourselves out of pocket? And mightn't we profitably "quit our meanness?" The rest of mankind are pretty nearly unanimous against sweet clover, and indignant against those who spread it. How came so small a section of the race as we'uns to have all the wisdom?

For a barrel of honey to lose 80 pounds in weight, and the owner to let it go as a mysterious but inevitable shortage, sounds hardly believable. Isn't "60 to 80" in that case a misprinted 6 to 8, I wonder? That much we might lay mostly to the absorbent power of dry staves. Page 745.

THREE STATES FOR CO-OPERATION IN HONEY-SELLING.

So, we now have at least three States to watch and see how joint action in honey-selling gets along—Colorado, and California, and Texas. May they all get what they want—and want only what they have a right to get. Page 745.

A COLONY WITH NON-SWARMING FORTITUDE.

The colony that first reared and then killed and carried out 42 young queens without swarming deserves—well, a ticket for their *fortitude*—to crib an old joke. Still, the colony with no need for such fortitude doeth better. Page 748.

SOME WHITE-ROBED TEXAS "CRITTERS."

Of a certain queer old ballad, I recall that it said among other things:

> "O what is that, that critter there,
> A swimmin' off so fast?"
> "It's nothing but a porpoise, sir,
> That's just been swimming past."

I incline to demand information of Mr. H. H. Hyde concerning "that critter there" that has him by the collar on the picture page of No. 50—that spirituelle cloud of fluffy white with some slight evidences of a living and angelic being inside of it. Are such "critters" plenty in Texas? And do they develop from the invisible world and grab a fellow unawares? Do they let go after awhile; or do they hang on permanently? In case one had to go through Texas on urgent business, is there some kind of strong netting, or some pungent sort of smoke, that can be relied on to keep 'em off?

MENDLESON'S MOUNTAINOUS LOCATION.

How grand, in mountains-round-Jerusalem sort, is the location Mendleson, of California, has got into! Beauty of scene, indeed, brings in no dollars directly, but it enters into one's life—supplies in one's life some things which dollars might omit to supply. Some one long ago has said, "I am a part of all that I have met." Page 753.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON. Marengo, Ill.

Pretty Cold Weather.

The thermometer stood at 16 degrees below zero this morning—Dec. 26. Glad our bees are snug and warm in the cellar. I think I would feel like providing each colony with a hot-water bottle if they were out-of-doors. And yet those people are to be envied who don't have to fuss about getting bees into the cellar.

The Sisters and the National.

A look over the list of members in the Annual Report of the National Bee-Keepers' Association is by no means devoid of interest from the Sisters' standpoint. As in other lines, the sisters are for the most part silent partners, wives sometimes doing work for which husbands get credit. So it is that only a small proportion of the names that appear in the list of members are those of women. Quite a number, however, appear in the list as members in full standing, and it may not be amiss to select these and make a little tabulated report of our own. Unfortunately, in too many cases the name alone is given, and we are left in the dark as to the number of colonies and the honey harvested. In the first column will be found the number of colonies, spring count, except in the case of California members, and in the National report only the number of colonies in the previous fall (1902) is to be found for California. Very likely, however, the spring count is much the same, for in California they do not make much of a business of winter losses. The list is as follows:

	No. Cols.	Lbs. Comb.	Lbs. Ext.
ARIZONA.			
Mrs. R. Bulkley			
CALIFORNIA.			
Mrs. Mary Avery.........	60		4000
Mrs. I. A. Chantry........	200		8000
Mrs. D. A. Higgins.......			
Mrs. J. F. McIntyre......			
Miss Maud Sanders.	110		800
Mary L. Small............			
Mrs. G E. Steel..........	120	120	4000
Nellie M. White..........			
ONTARIO, CANADA.			
Mrs. Samuel Rogers......	20		1000
COLORADO.			
Mrs. M. A. Booth.........			
Mrs. L. J. Broch..........			
Susie R. Cook............	189	747	240
Emma E. Evans..........			
Lydia C. Harris..........			
Caroline Lindenmeier	200	12,000	4500
Mary C. Porter...........			
Elizabeth Read...........			
Emeline Riggs............			
ILLINOIS.			
Mrs. H. W. Bartrum......			
Miss Mary Caldwell.......			
Mrs. Aaron Coppin.......			
Mrs. J. J. Glessner.......			
Mrs. W. H. Horstmann...	35	500	
Miss L. C. Kennedy.......		4672	
Mrs. Joseph Schwartz....			
Mrs. N. L. Stow..........			
Miss Minnie Yueill.......	6		
INDIANA.			
Mrs. A. F. Proper	89		
IOWA.			
Mrs. Clara W. Evans.....	225	7000	10,000
Mrs. M. J. Finson........	60		
Mrs. F. W. Hall..........			
KANSAS.			
Mrs. S. M. Roby..........			
MICHIGAN.			
Lurinda Cox			
MINNESOTA.			
Mrs. W. J. Fritze.........	44		5000
Mrs. E. D. Hance.........	2		
Mrs. J. B. Hutchison.....			
Mrs. J. B. Thompson.....	9		
NEW YORK.			
Jessie E. Marks			
Mrs. Andrew Payne			
NORTH CAROLINA.			
Miss Delia Hyatt.........			
OHIO.			
Mrs. Mary A. Ray........			
TEXAS.			
Miss Helen Buller........	4		
Miss Meta Hillje..........	4		
Miss Marie Sheldon.......			
UTAH.			
Mrs. L. S. Coleman.......	14		1800
Mrs. J. E. Dillman			
Mrs. H. Halgrate.........			
Mary Langston...........	42		2500
Mary Voigt			
WISCONSIN.			
Mrs. Paul Barrette........	54	3000	
Miss M. Candler..........	143		
Mrs. S. L. Kepler...... ..	55	400	3000
Mrs. W. J. Pickard.......	430		
Ada Pickard (Mrs. Boggs)	150		
Mrs. Jennie Towle	42		1960
Mrs. Wingate			

To the sisters it is due that North Carolina is at all represented in the Association, Miss Hyatt being the sole representative, with never a brother from the entire State to keep her company.

Colorado and Illinois lead the list as to numbers, each being represented by nine of the sisters.

Only 57 of the sisters, all told, are members of the Association. Ought not that number to be at least doubled? In several cases the names of husband and wife both appear as members—an example well worthy of imitation. The Association is at present a power, its power largely depending upon the number of its membership, and this is one of the places where a woman may count as much as a man, and where she also stands on an equal footing as to voting.

Shall not the sisters do their part in joining our National Association?

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Drawn-Out Foundation in Cold Weather.

Will 20 below zero have any effect upon drawn-out foundation which I left in the yard? It got moldy in my cellar.

MINNESOTA.

ANSWER.—No, nor 50 below, so long as the foundation is not handled, for of course it is brittle when so cold and would break easily. It is doubtful whether any great harm would come from its being moldy in the cellar, for the bees are good at cleaning.

Different Strains of Bees in the U. S.

How many different strains of bees are there in the United States?

ILLINOIS.

ANSWER.—I don't know; thousands of them. If you get Italians, that's one strain; if you have blacks, that's another strain. The first cross will make an additional strain, perhaps a number of different strains, for if there are differences even very slight that will differentiate one colony from another, you may say that they are of different strains. At least I think that's the way it is; but if any scientific breeder thinks I'm wrong I'll cheerfully stand correction.

Bees on Shares—Moving Bees on the Railroad.

1. What are the customary terms and arrangements for placing bees out on shares? I have 45 colonies in winter quarters which I want to move to Ordway, Colo., in the spring, and let some one handle them for me on shares. Am I supposed to furnish supers, sections-holders, etc., or just the brood-body and frames, letting the other person furnish the balance? Would it be fair all around to both persons for me to furnish the bees in as good shape as possible, and stand half of any further equipments necessarily purchased, and getting half the honey and half of the increase? What provision could be made to prevent the other party cheating me, providing I was not in the neighborhood all the season? Would the plan proposed be a practical one? I have bees here in Nebraska, and expect to put in the summer on the road and have no one to take charge of them for me. After next year I expect to handle them myself, and so I do not care to sell them.

2. When would be a good time to move the bees? and what is the best way to place them in the car? Should they be tiered up? If I did that, how would they be prevented from being jarred over by the bumping of the train? The bees are in standard 8-frame single-walled

dovetailed hives with a quilt over the frames (Hoffman), and the supers are filled with chaff; bottoms, supers, etc., securely fastened by nailing lath diagonally on both sides. What classification would they come under as freight? Would owner or other party have to accompany them? Ordway is on the Missouri Pacific railway, while this point is on the Union Pacific. Would transfer be necessary? Would early March do to move them, and would wire-cloth over the entrance be all right for ventilation? NEBRASKA.

ANSWERS.—1. To be entirely frank, I must say that although I have heard and read much about bees on shares, I don't know enough about the subject to answer your questions with any degree of authority. There is no fixed rule on the subject, and the share business is not at all sure to be satisfactory to either party. The plan you propose would be all right in some cases, providing both parties should agree to it, although usually you would be expected, I think, to furnish all supplies. I don't know of any way you could protect yourself thoroughly against a dishonest man.

2. A good time to remove them is after the severe weather of winter is over, for when very cold the combs are brittle and likely to break. Place in the car so the frames shall run from front to rear of car. If room enough, better not tier up. If necessary to tier up, fasten in some way by boards nailed across the car. Classification differs; ask your freight agent. Not necessary to accompany them. You could probably arrange to have them go through in the same car. Early March would be a good time; and at that time wire-cloth over the hive-entrance would probably give sufficient ventilation, unless the entrance be small.

Spacing Frames—Number of Frames.

1. What distance are your frames spaced from center to center? and if you were starting anew what distance would you space them? What are your reasons for your preference for either distance?

2. How many frames of Langstroth capacity do you use for comb honey? and if you were starting anew how many would you use? And what is your source for surplus honey, when does it commence to bloom, and how long does it last? OHIO.

ANSWERS.—1. My frames are spaced $1\frac{3}{8}$ from center to center, and if I were starting anew I think I would make no change. One reason for this spacing is that it is the fashion; in other words, I think the majority favor it. It is true that some report $1\frac{1}{2}$ as the preference of the bees; but even if that should be so it must be remembered that the bees figure in drone-comb, and I don't.

2. If I were starting anew I would use the same as I am using now, the 8-frame hive, part of the time using two stories. Unless, however, I intend to pay much attention to my bees, I should use 10-frame hives. My chief source of honey is white clover, which begins to bloom about the first of June, sometimes failing utterly to yield nectar, sometimes yielding two weeks, and from that on up to two or three months.

Rearing Queens Early—Sample of Honey.

1. What is the best way you know of, to rear queens and drones very early in the spring, so I can get them purely mated before my neighbors' bees get to flying? I want only a few queens, but I want some good ones.

2. I am going to mail you a sample of honey which my bees gathered in the month of September, and as long as I have kept bees I have never seen anything like it. Is it honey-dew? Do you think bees will winter on it? They would bring in 8 or 9 pounds a day, by the scales, and I have a thousand pounds of it. NEW HAMPSHIRE.

ANSWERS.—1. It isn't easy to hurry up the business of queen-rearing much before the usual time. About the only thing you can do is to stimulate by feeding, and strengthen by exchanging combs of sealed brood. A colony thus treated will have drones earlier than it would otherwise, providing it has drone-comb in the center of the brood-nest. The same treatment applies to the colonies to be used for rearing queens.

2. The sample received is water-white and of good flavor. I don't know from what it was gathered, but it was not honey-dew, and I should have no anxiety about its being good winter food.

Sowing Sweet Clover Seed Near a Coal-Mine.

I have read that sweet clover will grow on almost any kind of soil, that it will grow on such barren places as old coal-dumps, for example. These dumps are not made of coal, but are composed of the clay that comes out of the mine with the coal together with disintegrated soapstone. There is an abandoned shaft near my apiary which has a very large dump by the side of it, and probably several acres of ground about it that is of no use whatever for cultivation. The question is this:

1. Do you think it would pay to seed that dump and the surrounding ground with sweet clover? I should add, perhaps, by way of explanation, that there is an abundance of sweet clover within a mile of the dump, growing wild. I have never seen the plant grow on those places as a result of natural causes.

2. When is the best time to seed the ground, provided it seems advisable to do it? ILLINOIS.

ANSWERS—1. Sweet clover seems to be fond of places or soils avoided by other plants; stiff clay for instance; and the likelihood is that it would do well on those dumps. It wouldn't pay you the first year, for you would get no blossoms till the second year. The second year you might get enough nectar from it to pay for the seed, but it is doubtful, for there being abundance of the plant within a mile, and your not having many bees, you would hardly see much difference in your crop. But for all that, if I were in your place I would invest a half dollar or a dollar in seed, and scatter it in the thinnest manner *all over* that ground. Then a year later I would do the same thing. That will give a start, and the plants will in a few years cover the ground, ready to render the increased harvest needed by your increased number of colonies.

2. Sow in early spring, as perhaps the best time, although any time from the time seed is ripe until late the following spring will do.

After writing some other things following your questions, you say, "Please pardon me for writing so much." Please don't say that again; it isn't pretty talk. Although I haven't the time for writing private letters to the many good friends in the world of bee-keepers, I do have time to read their letters, and always enjoy having, aside from the questions, something not intended to go into print. It rests me. Do it again.

Some Expert Opinion

"In the multitude of counsellors there is safety."—BIBLE.

Use of Separators—Kind, and Why?

If for some reason you were to start i new to keep bees, and were obliged to get an entirely new outfit—

Ques. 3.—Would you use separators? If so, what kind? Why?

N. E. France (Wis.)—Yes.

Wm. Rohrig (Mo.)—I do not produce comb honey.

O. O. Poppleton (Fla.)—I do not produce comb honey.

R. L. Taylor (Mich.)—Yes. Tin. Because they last, and are always in good order.

C. H. Dibbern (Ill.)—I. I would not produce a pound of comb honey without separators.

G. M. Doolittle (N. Y.)—Yes, between the sections. Because perfect comb honey can be secured in no other way.

Dr. C. C. Miller (Ill.)—Surely. Plain wood. They cost so little that I can afford to throw them away after using once.

P. H. Elwood (N. Y.)—We always use wooden separators. We have used tin, but wood is better—warmer—better ladders, etc.

2. Wood; yellow poplar preferred in solid sheets, as wide as the sections used. To insure good, straight combs, of even weight.

L. Stachelhausen (Tex.)—I would use separators to get straight combs in the sections. Probably fences are the best separators.

Geo. W. Brodbeck (Calif.)—Yes. The fence separator. To secure uniform sections. The fence secures this with the least obstruction.

J. M. Hambaugh (Calif.)—Were I producing comb honey for the markets, yes, every time. Tin was always my favorite. It is less bulky and more desirable.

Eugene Secor (Iowa)—In the supers? Yes, every time. Kind? That doesn't matter so much. I have used tin, veneer and fence. Don't see much, if any, difference.

Prof. A. J. Cook (Calif.)—I should, as I found I could not get as good, straight sections without them. I have little choice between wood and tin. Cheapness and convenience would guide.

C. Davenport (Minn.)—Yes, I would use separators of some kind. I have never used the slotted or fence separator, so I can not give an opinion as to whether they are superior to the old style or not.

Mrs. L. Harrison (Ill.)—I've never used separators. Our honey is sold in the home market. We use a very small comb-guide, and if any sections are built the wrong way, they are easily disposed of to families.

E. E. Hasty (Ohio)—Most assuredly. Tin. I think it on the whole handier. I think bees not quite so much inclined to build onto it as onto wood. For certain strains of bees, that need to be *coaxed up* in every possible way, perhaps wood should be chosen.

Jas. A. Stone (Ill.)—Yes, all the time. The fence, with plain sections $1\frac{1}{2}$ inch, for the reasons that bees fill them much better to look at, and will put in as near a pound as in a wider section, as they fill so much closer to the wood, and they are more easily cleaned.

C. P. Dadant (Ill.)—I might use them in producing comb honey, but not in extracted honey. Because, when producing extracted honey, it is of small importance whether or not we have absolutely straight combs, and the separators are always in the way of the bees.

E. S. Lovesy (Utah)—I would use tin or wood separators between every other row of sections, scalloped at both edges, with section-holders above and below the sections. This keeps the sections clean, and makes the honey good weight, which is satisfactory to the purchaser.

Adrian Getaz (Tenn.)—Yes. The fence. To secure uniformly filled sections. Also, none bulging so as to prevent casing. The honey coming close to the edges of the sections, makes them look much better. The absence of corners (plain sections being used with the fences) fscilitates the casing, and also the cleaning of propolis from the sections.

E. Whitcomb (Nebr.)—Yes. The fence separator. For the reason that the bees are able to get to and from their work more easily, and seem to do their work more perfectly. If separators are to be used at all, and we believe that they are, the fence seems to be the ideal one.

J. A. Green (Colo.)—Yes, most decidedly. I have not yet made up my mind that there is anything better than the old tin separator. I use two slat or "fence" separators in each super, one between each outside row of sections and the side of the super; but aside from this, I have not seen enough advantage in their use to offset their disadvantages.

Rev. M. Mahin (Ind.)—If I expected to produce comb honey in large quantities for shipment, I think I would use separators. But I sell all of my honey at home, and am not able to supply the demand. I have never seen the fence separators, and with my present light I would choose the plain, because they seem to me more simple, and more easily manipulated.

Dr. J. P. H. Brown (Ga.)—I would not. With me the honey-flow does not come in "a flood," but is slow, and does not come in a rush at any time, and when the passage to the surplus department is encumbered with obstructions, the bees are slow to go there to deposit their honey, but will store it outside if there is any place to put it. Were I to use separators I would use tin in preference to wood. The tin does not warp and twist, and the bees do not gum it up with wax and propolis as readily as they do with wood.

S. T. Pettit (Ont.)—Yes. Wood separators of three strips; bottom and top strips one inch wide, and center strip just wide enough; allowing one-quarter inch between the strips to make the separator as wide as the section is tall. For the 4¼x4¼ section the center strip will be 1¾ inches wide. These strips are fastened together with suitable tins, cheaply made and easily put on. May be half bee-way strips and a section to suit would be preferable, but I never tried them. Of this I am well persuaded, that is, the spaces in a separator should not be less than a quarter inch.

G. W. Demaree (Ky.)—It depends upon the honey market as to whether I use separators or not. Separators are a decided hindrance to the yield of honey in pounds; therefore, as my home and railroad men, customers, take all the comb honey I now produce, and as they prefer it cut out of the section-boxes, and packed in buckets and jars, and covered with honey in the extracted state, I would lose by using separators. This season my comb honey, packed as above described, netted me 15 cents per pound at my honey store-room. When I do use separators I prefer plain tin separators. Why? Because they are less "fussy" than other kinds.

Mrs. J. M. Null (Mo.)—Yes. Have had but little experience with fence separators, but that little causes me to incline towards the plain separator. Why? Does that mean why do I have a preference, or why do I advocate the use of separators? If the former, I beg a little more time, as I am not sure my inclinations are in the right direction; if the latter, to insure uniformity of sections. Indirectly they are great missionaries, almost, if not quite, eliminating that fretful feeling which so frequently accompanies the casing of bulged sections, and the profane language, so all-important a factor with many on such occasions, shrivels into insignificance, or steps down and out, when separators have been used.

R. C. Aikin (Colo.)—Separators *first, last, and all the time.* I think it would be fence separators, but want mine a little different from those commonly used. Never produce comb honey without separators of some kind.

So far, my experience is better finish with fence than the old style, but I must be honest and say that I have used fences only with 4x5 sections in my shallow-frame divisible-chamber hive, while the 4¼ sections have been used with the old separators. No, I will take that back, I have used a good many 4x5 sections with fences on Langstroth-frame hives, but have never used many 4¼ sections with divisible-chamber hives. Where ever used the 4x5 sections with fences show best results, both in finish and readiness with which the bees worked in them. Though the experience covers two, and somewhat three seasons, using both styles, little doubt exists, though to be positive and conclusive 4¼ sections should also have been used with fences.

Other reasons are, that no apiarist can fully control conditions so as to get evenness of weight, and smoothness of finish, and honey all within the wood.

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FROM MANY FIELDS

Had to Feed for Winter.

We have not had a rain until to-day, in this vicinity, or part of the south, since August 6, while it rained the latter half of June and all of July, almost continuously. Our honey-flow down here generally closes with June. I have had to feed my bees over 500 pounds of granulated sugar, and half a barrel of honey that I extracted last August or July, in order to winter them. We winter our bees on the summer stands, without any extra preparations.

John Kennedy.

Adams Co., Miss., Dec. 9.

"Arizona Bachelor Bee-Keepers Want a Car-Load of Wives."

The above headed clipping went the round of the Associated Press and was copied by the American Bee Journal, Nov. 19. As my name appears in it prominently, I beg to explain.

As I have a large alfalfa farm, 150 head of cattle, 14 apiaries, a wife and children, I seldom have time to write for the Bee Journal, but since I am called on I will not shrink from duty. In a private letter to Mr. J. Few Brown, of Virginia, I explained the future prospects of the bee-business in the arid west, referring to the fact that the government was spending 16 million dollars to put in large storage reservoirs, the one for this county covering 18 square miles, with water from 100 to 230 feet deep, to be used in irrigating vast tracts of the finest valley land, nearly every acre of which will be seeded to alfalfa, increasing the output of honey from this County 50 to 100 carloads a year, and other parts of the arid west in proportion. Little did I think, 35 years ago, while reading the American Bee Journal, and taking my first lessons in bee-culture, that to-day I would be in the midst of The Great American Desert, producing and shipping to the eastern market nearly half as much honey as all of Ireland, and all from a start of taking bees on shares, 7 years ago, working over store-boxes into movable-frame hives to hold them. Nor did any one think, 35 years ago, that Arizona, Colorado and Cali-

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fornia would to-day rule the price of honey in the West and figure in the market of the world.

I referred to the fact that the American people were great for independence and a home of their own, and that the government encouraged it by giving each a farm of 160 acres, providing they live on and improve it for 5 years; and said that thousands of the most enterprising young men, the very flower of the East, had come West to get free homes, and grow up with the country, nearly all leaving their "best girls" behind, filling the West with bachelors, and the East with maids and widows. Fully a quarter of the businessmen, one-third of the bee-keepers and farmers, and over two-thirds of the mining men, are single. I said that wages for assistant housekeepers was many times greater than that of the East, and that there was a great demand, and that a car-load could be placed in our little valley, and over 500 in the capital of Arizona, in the best of families. I advised emigration, and those of limited means to fill positions of trust and honor until they could establish a home of their own. The Associated Press, by some means unknown to me, got hold of my letter, and thinking they had received a new revelation heralded it over the wires to nearly ever city in the United States. Mr. York received the electric current from Richmond, Va., and copied it, but seems to think the better class will prefer to remain in the East and be old maids, rather than be "peddled out" to the Western bee-keepers, as he calls it. He forgot that it is their brothers, cousins, and old schoolmates, that were attracted westward and have opened up a vast empire, and with the Government aid in storing water, and the arrival of the ladies, the arid West will be a land of happiness, milk and honey. Chicago being the great supply market for this new empire, Mr. York should have an eye on this rapidly growing section, from which he must expect his largest increase in business.

My second wife took her first ride on the cars, and that all alone, when she came to marry a busy Arizona bee-keeper, leaving her old homestead, with a 15-room mansion, in Pennsylvania, and doesn't consider she was "peddled out," as Mr. York calls it.

B. A. HADSELL.

Maricopa Co., Ariz., Dec. 5.

[Well, Mr. Hadsell, you'll have to settle this with Miss Wilson, and not with us. She it was who suggested the "peddling-out" business.

You surely have a great country, where you live, and many another lonesome Eastern girl might do well to take a final trip down your way, and "double up" with your hustling, get-there bee-keepers and ranchers.—EDITOR.]

Ventilation of hives.

I don't know whether this will be timely or not. My soured honey, page 783, tempts me to say a few words on ventilation. I mean by this the size of the hive-entrance, for I believe the bees know how to use the air if they can get it, and do not need any help in that line.

My mind was busy looking for light on the question of honey souring inside of the hive, and when Dr. Miller said his hive-entrances at times were two inches high, and the full width of the hive, I concluded that it was sun-up at least.

When a bee-keeper with numerous hives to manipulate catches an idea he has the chance to verify it, and if he has everything about his bee-work, even to the smallest details, down in black and white in a book, as he should have, it is still easier. Now I can take my book, go into the bee-yard, and come very near proving a point to my own satisfaction. I notice that the hive-entrance, and the account of the past season's work, tally to a dot; where one is small so is the other. All bees are not alike, though; to my mind they show as many traits and characteristics as so many people would. One colony will carry in more nectar than they can take care of. Supposing in each case they lack ventilation, the consequence is a poor lot of honey. Another will

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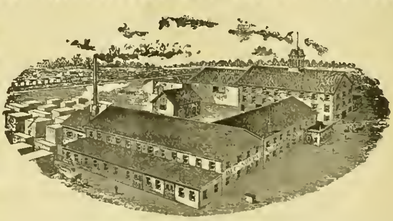

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bring in only what nectar they can turn into good honey, but in that case they don't store much, while in the next hive the bees do not believe in working under difficulties, so they loaf all summer. It does not seem to me that I ever saw bees loafing that had a broad, open entrance to the hive, if there was anything for them to work on. I knew the entrance to some of my hives was too small, but they were big, old-time Langstroth hives, with the bottom nailed on. I did not see what I could do about it; besides, I did not know how important it was that I should do something.

Now, if the honey-flow is extended and not too much at one time, this trouble will not be noticed so much, and while we are losing honey all the time, if we don't know it, it doesn't hurt. But when one colony of bees is carrying in honey at the rate of $1.00 per day, and the bees in the next hive are sitting in the shade fanning themselves, it is enough to make the ordinary bee-keeper "wild." I don't want you to think I have this all cut and dried, and never expect to have any more loafers. My rule for bee-keepers is, "Expect just anything, and prepare for it the best you can." Now if that isn't an India-rubber rule, what is?

To digress a little: Those old-time double-top Langstroth hives, I notice the bees in them don't swarm much; in fact, the past season, when everything else was "crazy" on swarming, they did not send out a swarm. Maybe Dr. Miller would just as soon have an "Ideal" hive as some "Ideal bees," if it all came to the same thing in the end.

Now, I am not writing this for the bee-keepers that know more than I do (which is the majority), but for the fellow that is groping around in the dark, as I am. But lest I should lead some one too far, let me say that a large entrance is of no use to the bees when they don't need it, but is rather a detriment, and at times can be a very bad thing. A good honey-flow and hot weather call for a large entrance; but nothing calls for a draft of air through the hive, in any locality I know anything about.

J. T. Reno, Jr.

Cedar Co., Mo., Dec. 6.

Swarming Bees Locating a Home.

Bees sometimes locate a home before leaving the parent hive, and after resting for a few minutes or hours leave for parts unknown, and fly until tired out, then settle down on a bush or fence-post, or on the ground; then the hunt is for a home. Hundreds of scouts leave the cluster in search of a home, and clean out half a dozen places for the same swarm, and the most favorable place will be accepted by the swarm, and when the swarm is gone to their new home hundreds of bees that have been hunting another home will return to the former location, not knowing

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PARADISE

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The December issue of the Review is a special number, devoted to Northern Michigan, nearly a dozen pages of descriptive matter and beautiful pictures showing up the bee-keeping capabilities of that part of the country—a country that, in many places, is not yet stocked with bees. Why eke out a scanty living in a poor locality, when there are rich fields unoccupied?

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Warehouses—Freeman and Central Aves.
CINCINNATI, OHIO.

Please mention Bee Journal when writing.

where the swarm has gone, cluster there, and remain for a week or more, and dwindle away one by one until they have all disappeared.

Sometimes a swarm will settle in a wild grape-vine, or under a limb of a tree, and being full of honey start combs, and the queen lays a few eggs, then the scouts fail to entice the swarm to leave its young, and remain all summer to make comb and rear brood; but I never found any honey to amount to much, only enough to feed the brood. But woe to them when Jack Frost puts in an appearance, or a ring-tailed coon reaches his paw in the combs and breaks them apart; then the poor little bees have to bid farewell to this cold, vain world, and pass to that bourne from which no bee has ever yet returned.

G. POINDEXTER.

Dewitt Co., Ill., Dec. 14.

Beedom Boiled Down

Pawn Your Watch and Get a Bee-Book.

A beginner wrote to a well-known American apiarist, asking for a few pointers on bee-keeping, as he had no money to buy a bee-book. The reply was at once laconic and practical: "Pawn your watch and get one."—GILBERT WINTLE, in Canadian Bee Journal.

How to Keep Honey Indefinitely.

Mr. Charles Weber, son of C. H. W. Weber, told me that it was no trick at all to keep all honey except alfalfa liquid indefinitely under all conditions. The temperature must be brought up to 145 degrees Fahr., and kept there continuously, without variation, for 36 hours. That is the whole secret. "But," said I, "will this not darken the honey?"

"No, sir, if you do it right. *Long* heating, *continuously* applied at a *moderate* temperature is much more effective than a high temperature for a short time. The latter spoils the flavor of the honey, as well as darkens it, while the former leaves it with its original delicacy of flavor, and with no darkening of color."

He emphatically stated, however, that his formula would not apply in the case of alfalfa. He could liquefy it, of course, but it would not keep in a liquid condition nearly so long.—Gleanings in Bee-Culture.

Bees Wintering in Spite of Disturbances.

L. C. Root, well-known to older bee-keepers as the son-in-law of Moses Quinby, and himself a successful bee-keeper, on account of other business gave up bee-keeping some years ago. He says in Gleanings in Bee-Culture:

Although living in the heart of the town I was lonely without my bees; and as an experiment I secured in the spring of 1901 a single colony, and placed it in the loft of my barn. During the season I made from this colony an artificial swarm and took 100 pounds of surplus in sections, both colonies being left in good condition for any experiment in wintering.

The hives were placed on the south side of the stable, which is in a protected location, affording the bees frequent flights, for in the south of Connecticut there are often mild and sunny days even in mid-winter. A fire is kept in the lower room of the stable in severe weather, and this, with the animal heat constantly radiated, maintains an even, moderate temperature. The advantage of this position lies in the fact that it is a compromise between the exposure of outdoor wintering and the confinement of the usual indoor practice.

Two horses belonging to a physician are stabled directly under the hives; and as feed is kept in the loft, and all stable work done in the barn, the bees are subject to disturbance at all hours of day and night. Even with other conditions in their favor I did not believe it possible that bees could winter well in a location when they would be so continuously disturbed. Much to my surprise they came through in extremely good condition; in fact, they wintered so well that I have increased them during the present season to eight colonies, although I attribute part of my success in securing this increase to my good fortune in obtaining extremely good Italian queens to supply the new colonies.

If it can be proved that noise and jarring are not detrimental to bees in winter quarters, the knowledge may be useful to bee-keepers of all classes; yet my chief motive in relating this experience is that it gives encouragement to those who, like myself, have but limited room, and can not keep bees except in a building where disturbances are unavoidable.

California Honey and Producers.

The California producers of honey have organized a combination or trust, whose object is to relieve the industry from the slough of low prices into which it has fallen for the last few years.

Prices of California honey have ruled low for several seasons—4 to 5 cents per pound f. o. b. for extracted honey, and 9 cents for comb—owing mostly to competition among producers to unload at a time hardly consistent with buyers' operations, which are always best in the fall. This condition has been remedied, however, by the forming of the Honey Association, and, as honey is so much money, the same has found its way into storage, with prices held high, so that moving East brings 5½ cents, carload lots, for extracted, and 12 cents for comb honey.

Producers generally are in better condition financially, are operating on a larger scale, and are not forcing a market.

Honey associations have had a wonderful effect in giving stability to the business, and producers generally are holding for higher prices than the associations, of which there are five in Southern California, with the new large one just formed in Central California. These associations are now affording facilities for storage and necessary advances, and have yet to take up the distribution and advertising of a famous article of food.

The value of California honey has deteriorated for years past, owing to careless production, the sacrifice of quality for quantity. This is the cause of so much thin, unripe honey, and has practically killed the large European trade we enjoyed years back, and to an extent destroyed the esteem in which California honey was held.

With the good effect of association work and the interesting of men of modern ideas, California will attain the reputation again, and, with careful inspection of the product by men who are thoroughly familiar with and are producers themselves of the best grades, will in time create a large demand, gaining lost trade. This will mean a vast increase in production. Here is an opportunity for capital and enterprise, with a system of labels and brands and the knowledge of where the grades are best distributed, to build an immense enterprise. I have sold honey to an Eastern packer at 5 cents to be resold at 16 cents per pound under his own label.

The United States produces less than one pound of honey per capita, while sugar rates

NO GAS TO KILL
Very little lamp gas in an incubator egg chamber often kills every germ. No gas can possibly creep into the
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because it's heated by our rustless, heavy copper, hot water circulator. Don't waste money and lose good eggs experimenting with poor incubators. Send for free catalogue,B 10 and learn why the Sure Hatch hatches *sure*. Sure Hatch Incubator Co., Clay Center, Neb. and Indianapolis, Ind.

WE SELL ROOT'S GOODS IN MICHIGAN
Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Four percent off for cash orders in December. M. H. HUNT & SON,
BELL BRANCH, WAYNE CO., MICH.

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850,000 GRAPE VINES
100 Varieties. Also Small Fruits, Trees, &c. Best rooted stock. Genuine, cheap. 2 sample vines mailed for 10c. Descriptive price-list free. Lewis Roesch, Fredonia, N.Y.

Lice Do More than to eat your fowls. They eat your profits, for they sap the energy of the hen and take the "life" out of her. If the lice problem is neglected, a flock will not lay half as many eggs as you would get for your feed and work if you keep them free from lice. It's a big job to catch each fowl and grease or dust it by hand, and yet something must be done to keep down the lice. It has taken American inventors a long time to solve this problem, but at last a machine has come on the market that is simple and practical. It does the business in a common-sense way, and thoroughly cleans six to a dozen fowls at a time with less work than you have to do in dusting one by hand The first thing it does to them is to make them ruffle up all the feathers on their bodies, so that a surprisingly small amount of powder will kill all the lice on them. It is a simple, inexpensive machine, and will pay for itself in a year if you have only 25 fowls. It is one of those thing that you wish you had thought of yourself—it is so simple and practical. It is the invention of a practical poultryman and is endorsed by some of the leading poultry experts in the United States. Any one who wants the whole story can obtain free a little book that tells all about it, and gives a lot of practical information on the lice question, by addressing the manufacturers, The Chas. Schild Company, Ionia, Mich. Please mention the American Bee Journal when writing.

$12.80 For 200 Egg INCUBATOR
Perfect in construction and action. Hatches every fertile egg. Write for catalog to-day.
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THE "PLANET JR."
No. 12 Double Wheel Hoe also does the work "the easy way." With its great variety of attachments, it is suited to all hand, garden and market garden work. Cultivates either astride or between the rows. Throws the earth to or from, hills up, opens furrows, breaks up the top crust, and kills all weeds as fast as a man walks. Saves expensive hand labor. Write today for the 1904 catalog. It shows forty different machines, including Hand Seeders, Hand Cultivators, Walking Cultivators, Riding Cultivators, Sugar Beet Cultivators Harrows, etc. More than 100 illustrations, including 16 beautiful half tones showing home and foreign farm and garden scenes. Mailed free for asking.
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nearly 75 pounds, with butter at 30 pounds. California is the largest honey-producing State in the Union, shipping more than twice as much as Texas, the next largest producer. The list of the main honey States are as follows:

	No. Cars	No. Cols.	Av. lbs.
California	300 to 500	229,444	50
Texas	220	392,644	12
New York	160	187,208	18
Missouri	151	205,110	14
Illinois	135	179,953	16
Kentucky	130	203,820	13
Tennessee	110	225,788	12
Iowa	120	138,811	18
Pennsylvania	120	161,670	16
Wisconsin	120	106,090	26
North Carolina	110	224,539	10
Michigan	100	100,297	21
Ohio	100	151,397	13
Alabama	100	205,369	10
Virginia	85	139,064	12
West Virginia	83	111,417	15
Georgia	82	187,919	9

Ten other States yield from 80 carloads of honey all the way down to Arizona, 45 cars. Other States yield from a few to 40 carloads. —O. P. WASHBURN, in New York Grocery World.

W. H. Scarff, of New Carlisle, Ohio, is offering some decided bargains in his advertisement in this paper. Mr. Scarff handles only the best varieties, and, considering quality, his goods are remarkably cheap. He sells everything for the fruit-grower, and mails a splendid catalog to all who write for it. If you are interested in strawberries, read his offer of three new plants free. Please mention the American Bee Journal when writing.

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DRAPER PUBLISHING CO., Chicago, Ills.
Please mention Bee Journal when writing.

CONVENTION NOTICES.

New York.—The annual meeting of the New York State Association of Bee-Keepers' Societies will be held in the City Hall, Syracuse, N. Y., Friday, Jan. 15, 1904. N. E. France, W. Z. Hutchinson, and other prominent bee-men will be in attendance. An interesting program is being prepared. All interested in bees are invited to be present. Special rates have been secured at the Manhattan Hotel for accommodations.
C. B. HOWARD, Sec.
Romulus, N. Y.

Minnesota.—The Fillmore Co., Minn., Bee-Keepers' Association will hold their regular yearly meeting in the Court House at Preston, on Thursday and Friday, Jan. 14 and 15, 1904, All bee-keepers are invited to attend and take part in the meeting.
P. B. RAMER Sec.

New York.—The annual meeting of the Oswego County Bee-Keepers' Association, will be held at Oswego, N.Y., Tuesday, Jan. 12, 1904. N. E. France, General Manager of the National Bee-Keepers' Association, will be present and address the meeting. All persons interested in bees are cordially invited to be present.
CHAS. B. ALLEN, Sec.
Central Square, N. Y.

Minnesota.—The annual meeting of the Southeastern Minnesota and Western Wisconsin Bee-Keepers' Association will meet at Winona, Minn., at the Court House, in the County Commissioners' rooms, on Tuesday, Jan. 19 (and 20), 1904. A full attendance of the members, their wives and friends, is invited to this, our annual meet. All bee-keepers everywhere are cordially invited to attend.
W. K. BATES, Pres.
Stockton, Minn.

New York.—Mr. N. E. France, of Platteville, Wis., General Manager of the National Bee-Keepers' Association, has been secured by the Bureau of Farmers' Institutes to speak at a series of Bee-Keepers' Institutes in connection with the local bee-keepers' societies as follows: Canandaigua, Jan. 6 and 7: Romulus, Jan. 8; Cortland, Jan. 9; Auburn, Jan. 11; Oswego, Jan. 12; Amsterdam, Jan. 13; Syracuse, Jan. 14 and 15. The meeting on the 15th will be that of the New York State Association of Bee-Keepers' Societies.
C. B. HOWARD, Sec.
Romulus, N. Y.

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Modern Farmer	$0.50
Western Fruit Grower	0.50
Poultry Gazette	0.25
Gleanings in Bee-Culture	1.00
	$2.25

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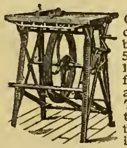

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Tells all about Bees in California. The yields and Price of Honey; the Pasturage and Nectar-Producing Plants; the Bee-Ranches and how hey are conducted. In fact the entire field is ully covered by an expert bee-man. Besides his the paper also tells you all about California Agriculture and Horticulture. $1.00 per year; 6 months, 50 cents. Sample copies, 10 cents.
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WANTED—Comb Honey in quantity lots. We are perhaps the only dealers in this article owning as much as 150,000 pounds at one time. Please state quantity, quality and price asked for your offerings, Thos. C. Stanley & Son,
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WANTED! FANCY COMB HONEY
In no-drip shipping-cases. Also Amber Extracted in barrels or cans. Quote your best price delivered Cincinnati. The Fred W. Muth Co.
32Atf Front and Walnut, CINCINNATI, OHIO.

Wanted To buy FANCY COMB HONEY in no-drip cases; also amber Extracted in barrels; spot cash
C. M. SCOTT & CO.
1004 E. Wash. Street, INDIANAPOLIS, IND.
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$300,000,000.00 A YEAR
and you may have part of it if you work for us. Uncle Sam's poultry product pays that sum. Send 10c for samples and particulars We furnish capital to start you in business. Draper Publishing Co., Chicago, Ill.

HONEY AND BEESWAX
MARKET QUOTATIONS

CHICAGO, Dec. 7.—At this season of the year there is not much trade in honey, retailers having laid in their stock for the holidays. Fancy comb honey for the Christmas trade has brought 13½c; No. 1 grades, 12½@13c; amber, 9@10c. Extracted white, brings 6@7c; amber, 5@6c. All extracted honey is sold on its flavor, quality, kind and style of package. Beeswax, 28@30c.
R. A. BURNETT & Co.

PHILADELPHIA, Dec. 10.—Large lots of comb honey being offered from States that were not supposed to have much stock. Bee-men, as usual, wake up now to the fact that they want to sell their comb honey and push it on the market, thus breaking the price. If they would only offer their honey in September, they would get more for it and it would be better for the producer and dealer. We quote fancy white, 14@16c; No. 1, 12@14c; buckwheat, 12c. Fancy extracted, 8c; amber, 6@7c. We are producers of honey, and do not handle on commission.
WM. A. SELSER.

ALBANY, N. Y., Dec. 15.—Market very dull, and lower since the cold weather. Quotations have to be shaded, and concessions made to effect any quantity sales.
H. R. WRIGHT.

CINCINNATI, Nov. 20.—The demand for comb honey is slower now than it was six weeks ago, owing to the enormous quantities offered on all sides. Fancy comb is sold in single case lots at 14c. The supply of extracted honey is big, although the demand is good. We are selling amber extracted in barrels at 5¾@6½c. White clover, in barrels and cans, 7½@8½c, according to quality. Beeswax, 30c.
THE FRED W. MUTH CO.

BOSTON, Dec. 21.—The demand for honey continues good, with an ample supply of comb, and a light supply of extracted. We quote our market as follows: Fancy white comb, 16@17c; No. 1, 14@15c; and practically no No. 2 to offer. Extracted, 7@8c, as to quality.
BLAKE, SCOTT & LEE.

KANSAS CITY, Dec. 30.—Instead of our honey market improving, it has grown worse as far as comb is concerned. The receipts have increased and fancy comb and No. 1 have been sold as low as $2.50 per case of 24 sections. We do not look for any improvement in prices before February, if then. We quote: Fancy white comb, 24 section cases, $2.60; No. 1, $2 50; No. 2, $2.40. Extracted, white, per lb., 7@7½c; amber, 6@6½c. Beeswax, 25@28c.
C. C. CLEMONS & CO.

CINCINNATI, Dec. 18.—The market on comb honey has weakened, as the supply has been larger than the demand. Fancy water-white 14c; off grades, lower. Extracted, amber, in barrels, 5¼@5¾c; in 60-lb. cans, ½c more; alfalfa, water-white, 6@6½c; fancy white clover, 7@8c. Beeswax, good demand; 30c for nice.
C. H. W. WEBER.

NEW YORK, Dec. 4.—Comb honey is arriving in sufficient quantities to supply the demand, and, as to the quality, most of the white honey seems to be off color, more or less. We quote fancy white at 14c; No. 1 at 13c; amber, 11@12c; and buckwheat, 10c. Extracted, light amber, at 6c; white, 6½c; Southern, 55@60c per gallon; buckwheat, 5½c. Beeswax, 28@29c.
HILDRETH & SEGELKEN.

SAN FRANCISCO, Dec. 16.—White comb, 1-lb. frames, 13@14 cents; amber, 9@11c. Extracted, white, 5½@6c; light amber, 4½@5c; amber, 4@4½c; dark amber, 3½@4c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

Demand is not brisk and is mainly for the choicest and most ordinary, or for water-white and for dark honey. The latter is in moderate request from bakers for honey-cakes, which serves for this purpose as well as light honey, and is given the preference on account of cheapness. Present stocks are largely medium amber grades and these are moving slowly.

HONEY AND BEESWAX
When consigning, buying or selling, consult
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1 lb., by mail, 30c: 5 lbs., by express, $1.00; 10 lbs., by express, $1.75.

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Twenty Thousand Additional Square Feet of floor-space just added to our plant. We now have over Forty-Five Thousand square feet of floor-space. We certainly can take care of your orders promptly. Remember That.

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Our Acme Hive, the shallow body style, simple and cheap. Our New Wisconsin Hive, a Portico Front, and the same inside arrangement as the regular dovetailed.

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One of Many.

NEW HAVEN, IOWA, June 27, 1903.

G. LEWIS CO., Watertown, Wis.

GENTLEMEN:—I must say something in regard to the goods you have sent me. They are very good, and I received them in fine condition and consider same cheap. Some people make their own hives, but I think this is a foolish plan when you can get goods like this well made, neatly finished and in such perfect condition. I have used 1000 sections and find everything all right. If anybody wants to know where to send for the best bee-supplies, tell them to write to me. Yours for business,

BENNIE DIEDERICH.

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National Election Results.
(SEE PAGE 20.)

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PROF. A. J. COOK.

AMERICAN BEE JOURNAL

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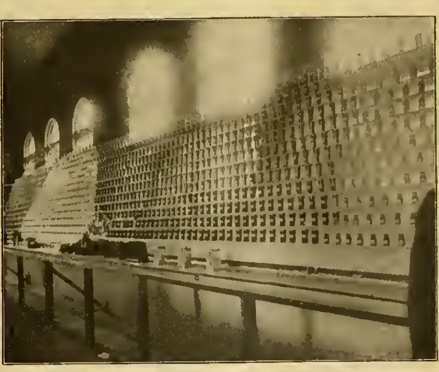
WEEKLY—$1.00 A YEAR.

44th Year. CHICAGO, ILL., JAN. 14, 1904. No. 2.

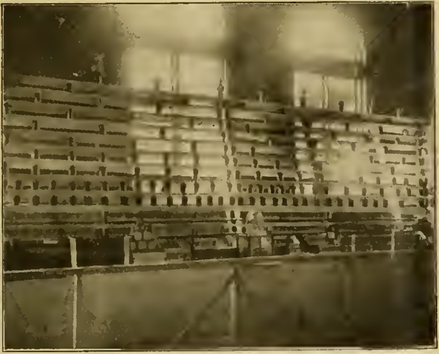
Apiarian Display at the Illinois State Fair, 1903.

(See page 20.)

Display of Jas. A. Stone & Son, of Sangamon County.



Display of Chas. Becker, of Sangamon County.



Display of George Poindexter, of De Witt County.

Display of Aaron Coppin and Wife, of Marshall County.

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Cape Colony, South Africa. R. J. KING.

⁂

The bee-fixtures that I ordered of you came to hand in good order, and are the finest work I ever saw. Every thing went together like the leaves of a book. The supers fit my Quinby hives perfectly, and are sure to give better satisfaction, although costing a little more than what I could have got them for from your agent in Portland, Oreg. Thanks for your promptness in filling my order for odd sizes.
H. A. MARCH.
Fidalgo, Wash.

⁂

"I have been using the fence separator, and find them much superior to solid goods. The 450 shallow hives you made for me are giving good satisfaction."
Vigo, Tex. J. E. CHAMBERS.

⁂

I have just now unpacked and examined the goods sent by you, and am greatly pleased with the lot.
Scottsville, Ariz. W. H. GILL.

⁂

These hives have proven very satisfactory, and I now wish 25 more of the same kind.
Very truly yours,
Tecumseh, Mich. P. W. A. FITSIMMONS.

⁂

While writing you this, I must say the hives I ordered of you were first-class in every particular, and not one mistake.
F. L. POWERS.
Artemisa, Cuba, W. I.

A. I. ROOT CO., Medina, Ohio, U. S. A.
Dear Sirs:—The shipment of hives and bee-supplies, which you sent me, arrived in excellent condition, and every one who has seen them, is delighted with the accuracy and precision of the workmanship of every detail, both of the goods and the manner in which the order was executed.
Yours very truly,
Cape Colony. FREDERIC T. BIOLETTI.

⁂

"People are beginning to change their bees to the Root hive. My trade being so much better this season than previous years."
Yours for service,
Penuville, Ind. ALFRED GRISSOM.

⁂

THE A. I. ROOT COMPANY, Medina, Ohio.
Gentlemen:—I am well pleased with your prompt way of doing business. The goods are just simply nice. Many thanks.
Yours truly,
JOHN D. A. FISHER.

⁂

The goods ordered have arrived, and are very fine, giving entire satisfaction, as is invariably the rule when ordering from you. Allow me to thank you for your promptness which I appreciate more this time than usual, as I needed the goods very much. I can get goods from your factory in about the same time that it takes to receive a reply from some parties at no greater distance. W. A. KLOCK.
Herkimer, N. Y.

⁂

Your chaff hive, the last one, is the thing. I had them out with no protection, not a fence or tree, and the north wind howling around them with mercury at 42 degrees below, and that wide entrance all open. I did not expect them to come through. It seemed that enough arctic cold would come in the entrance to freeze brass bees; but these came out strong in spring. S. J. HARMELING.
Marion, S. D.

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AMERICAN
Establisht in 1861
The Oldest Bee-Paper in America
BEE JOURNAL
Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

GEORGE W. YORK, Editor. CHICAGO, ILL., JAN. 14, 1904. Vol. XLIV—No. 2.

Editorial Comments

Work of the National Association.

In the report of the General Manager, issued last month, 35 cases are enumerated that were looked after and defended by the Association during 1903; of which one was in Arizona, 4 in California, 2 in Canada, 2 in Colorado, 3 in Illinois, 1 in Indiana, 4 in Iowa, 2 in Michigan, 2 in Minnesota, 2 in New Jersey, 1 in New Mexico, 4 in New York, 1 in South Dakota, 2 in Texas, 1 in Utah, and 3 in Wisconsin. Details are given of five of the more important cases.

General Manager France urges that members should be careful about getting into trouble with neighbors on account of bees, saying that from the scores of letters he has received he is satisfied that in many cases the owners of the bees could have avoided the trouble. He says: "Members must not assume any obligation expecting the Association to reimburse them, without first getting the advice and consent of the General Manager."

The General Manager seems to agree with those who think it would be as well to have a smaller number of directors; saying, "The number of members on Board of Directors is none too small, as experience has proven in many cases."

From the last United States census is given for each State the number of colonies of bees June 1, 1900, and the pounds of honey for 1899. For the whole United States the number of colonies was 4,109,626, valued at $10,186,573; honey 61,196,160 pounds, value of honey and wax being $6,664,904.

The part of the Report, however, which will be studied with greatest interest by many is the statistical report that accompanies most of the names in the list of members; and, no doubt, many will regret that some have failed to send in any report. The headings of the columns in the report are: Fall Count 1902; May Count 1903; Wintered in Cellar; Taxed Valuation; Comb Honey Produced; Extracted Honey Produced.

All in all, the outlook for the future of the Association is most promising.

Honey of the Backwood's Bee-Keeper.

Mr. Allen Latham, of New London Co., Conn., sends us the following:

DEAR MR. YORK:—It would interest you to see some of the honey exposed for sale here in our best stores. Connecticut is still primitive in certain respects. There are farmers about here who still brimstone their bees and take the honey, bee-bread, cocoons and all to the store, where it is laid in great slabs of tough comb on a platter, sometimes under a glass, sometimes exposed to dust and dirt. And the price at which it is retailed out is—what do you guess?—22 cents! It almost took my breath away when I saw it, for I was retailing the choicest chunk honey at 15 cents; honey that would command the very fanciest price were it only in sections. How it happened not to be in sections may be the subject of an article later on.

ALLEN LATHAM.

There is a large amount of public education to be done by up-to-date bee-keepers, not only among some of those who attempt to produce and market honey, but among grocers and storekeepers. Really, in many ways, bee-keeping and honey-production are only in their infancy. Mr. Latham's experience can be duplicated all over the country, 'tis sad to say. There are doubtless many bee-keepers who dump their honey on the city market, who could realize much more out of it by selling it near home. There are many grocers who never have handled honey put up in present-day style.

Certain very good people are urging bee-keepers to "keep more bees." That is all right for some, but we believe what the majority of bee-keepers need first is to develop a better and more remunerative market or demand for the honey their present number of colonies produce. Better prices may often more than equal more bees, and with less risk and work.

Some Big Bee-Keepers of Our Country.

In the National Association's Annual Report appear 30 names of bee-keepers having 500 colonies or more each. Unfortunately, some among the largest bee-keepers on the list give no figures. Those that do appear are as follows:

F. M. Hart, Calif......	500	W. H. Lewis, Tex.....	700
Herman Lehman, Calif.	500	W. A. Hickox, Colo...	723
M. V. Facey, Minn....	500	G. W. Brodbeck, Calif.	800
A. I. Root, Ohio.......	500	J. F. McIntyre, Calif..	800
E. R. Root, Ohio......	500	M. C. Wall, Ariz......	900
I. A. King, Tex.......	500	W. T. Richardson, Calif	900
W. D. Moffatt, Calif...	550	Wm Rohrig, Ariz......	1000
John Nippert, Ariz....	600	John F. Crowder, Calif	1000
S. G. Kelly, Calif......	600	Emerson Bros., Calif..	1000
Udo Toepperwein, Tex.	600	M. A. Gill, Colo.......	1050
N. L. Stevens, N. Y...	606	W. O. Victor, Tex.....	1200
T. F. Arundell, Calif..	640	L. E. Mercer, Calif....	1300
I. D. Flory, Calif.....	650	T. C. Stanley & Son, Ill.	1500
Joseph Moffatt, Calif..	650	H. H. Hyde, Tex......	1500
A. F. Spurlin, Calif...	700	M. H. Mendelson, Calif.	1580

Thirty bee-keepers with 24,549 colonies of bees, an average of more than 800 each, is probably not to be matched in any other country in the world. It must be noted, however, that in a number of cases fall count is given.

Why Do Honey-Plants Vary in Nectar-Yielding?

Can any one tell us why it is that some years a honey-plant, white clover for instance, yields bountifully, while another year, with even a greater abundance of bloom, it seems utterly barren of nectar? Possibly the knowledge would be of no practical value to us, but one can not help asking. Again, why is it that some plants are good honey-yielders in one locality and not in another? This was referred to on page 739 (1903), and curiously enough more than one seems to have understood that it was there taught that bacteria were needed on the roots of asters and goldenrods. A more careful reading will show that the exact reverse was meant. Surely, the presence or absence of bacteria can not account for the presence or absence of nectar—what will account for it? Who has the answer?

The Life of Bees—A Correction.

On page 820 (1903) occur the following words: "If we assume that the black queen was removed June 6, that makes 61 days as the life of her latest descendant, supposing it died Aug. 6." That piece of bad arithmetic might have slumbered quietly in peace had not a number of letters promptly been written by intelligent readers of the Bee Journal, calling attention to the error. Of course, when a queen ceases to lay June 6, the young bees from the last day's laying will not emerge from their cells till 21 days later, and instead of being 61 days old Aug. 6, would be only 40 days old, thus confirming the generally accepted belief that the average life of a worker-bee in the busy season is about six weeks.

Just how any one—even one who knew nothing about bees, but who had a dim knowledge of the general fact that living things proceeding from eggs required some time from the laying of the egg—how such an one could deliberately assume that a fully matured bee should emerge from a cell on the same day on which the egg was laid in that cell, is a thing that can be considered only as one of those unaccountable slips for which there is no satisfactory explanation, and for which no adequate apology can be made. The one softening feature in the whole miserable affair is the kindly spirit with which so many have called attention to the error. Let us hope that the interval between such blunders may be a long one.

Miscellaneous Items

The National's Election.—We have received the following from Mr. W. F. Marks, chairman of the Board of Directors of the National Bee-Keepers' Association:

To W. F. Marks, Chicago, Ill., Dec. 31, 1903.
Chairman Board of Directors N. B.-K. A.

We, the committee, selected to count the ballots cast at the annual election for General Manager and three Directors of the National Bee-Keepers' Association, also on Amendments to its Constitution, having duly counted the same, report as follows:

RESULT OF THE BALLOT.

Total number of votes cast 552; necessary to elect, 277.

For General Manager.—N. E. France, 518; George W. York, 6; Emerson T. Abbott, 5; W. L. Coggshall, 4; Dr. C. C. Miller 2; and the following 1 each: C. A. Hatch, O. L. Hershiser, J. F. McIntyre, E. S. Lovesy, Louis Scholl and W. Z. Hutchinson.

For Three Directors.—R. C. Aikin, 444; P. H. Elwood, 404; Wm. McEvoy, 268; E. R. Root, 195; George W. York, 20; Prof. A. J. Cook, 19; Emerson T. Abbott, 10; W. L. Coggshall, 10; G. M. Doolittle, 9; J. F. McIntyre, 9; Wm. Rohrig, 9; E. S. Lovesy, 8; H. H. Hyde, 7; H. C. Morehouse, 6; Dr. C. C. Miller, 6; D. W. Working, 5; Frank Benton, 4; N. E. France, 4; M. A. Gill, 4; C. H. W. Weber, 4; Frank Rauchfuss, 4; C. P. Dadant, 3; L. Stachelhausen, 3; O. L. Hershiser, 3; W. Z. Hutchinson, 3; M. H. Mendleson, 3; W. O. Victor, 3; the following 2 each: J. J. Cosby, J. T. Calvert, Fred W. Muth, W. F. Marks, A. C. Miller, F. Wilcox, Chalon Fowls, F. E. Brown, Jas. A. Stone, J. L. Strong, W. S. Pouder, J. T. Moore, Wm. A. Selser, J. E. Crane, J. B. Rick; and the following 1 each: John Rick, J. N. Hunter, Wm. Stolley, J. W. Johnson, Udo Toepperwein, Arthur Stanley, Harry McCombs, C. A. Hatch, G. W. Brodbeck, J. P. West, H. W. Coley, Mrs. H. G. Acklin, Mrs. N. L. Stow, W. J. Craig, J. S. Bruce, E. E. Hasty, C. M. Morris, E. C. Atkin, J. M. Hambaugh, Huber Root, E. B. Tyrrel, N. L. Stevens, W. D. Wright, J. A. Green, F. P. Jansen, J. Q. Smith, Gus Dittmer, J. E. Chambers, J. E. Hetherington, H. G. Quirin, H. H. Keeler, I. J. Stringham, F. Greiner, J. U. Harris, H. G. Acklin, Wm. Russell, Frank Moeser, A. B. Mellen, Chas. W. Voigt, John Terens, F. A. Salisbury, J. M. Jenkins, R. B. Herron, H. E. Wilder, S. C. Ferguson, W. A. Hickox, A. A. French, J. F. Flory, Wm. Couse, M. V. Facey, M. Hart, J. W. Ferree, Henry Alley, J. G. Corey, J. C. Morrison, Geo. E. Hilton, John Myers, Chas. Stewart, C. P. Gillette, Edwin Bevins, N. D. West, and C. H. Pierce.

For Amendments, 491; Against Amendments, 10.

George W. York, *Secretary.*
C. C. Miller, *Director.*

Whereas, N. E. France having received "a majority vote of the members voting" for General Manager, is elected General Manager of the National Bee-Keepers' Association.

R. C. Aikin and P. H. Elwood having received "a majority vote of the members voting" for Directors, are elected Directors to succeed themselves. No one having received "a majority vote of the members voting" for a Director to succeed E. R. Root, E. R. Root will hold over as provided in the Constitution under which this election was held.

The Amendments to the Constitution having received "a majority vote of the members voting," are adopted.

W. F. Marks,
January 1, 1904. *Chairman Board of Directors N. B.-K. A.*

* * *

Illinois State Fair Apiarian Display.—At least one department of the Illinois State Fair held at Springfield, Sept. 26 to Oct. 3, 1903, exceeded all former displays, if not the largest and best ever put up at any State Fair anywhere. This was the apiarian exhibit. It was simply superb. It almost equalled the World's Fair display in 1893. It did in quality, at least. In quantity, of course, it fell short of that at the World's Fair, as there were but five exhibitors at the Illinois Fair. We show four of the displays on the first page this week, and would have given these sooner had the photographer, Mr. Percy Stone, been able to send the pictures to us earlier than he did. It is amateur work, and had to be done when Mr. Stone found the time to develop the negatives. But the pictures are just as interesting now as earlier.

Mr. Geo. M. Rumler, of Indiana, also had a fine exhibit of honey, beeswax, and bees, but for some reason unknown to us, a picture of his display was not taken, so we can not show it also. Mr. Rumler won a number of the premiums, as will be seen by referring to the list given below.

Referring to the four displays shown, we may say that Mr. Becker had a pyramid of beeswax in various size cakes near the center of his exhibit, and also the words, "Ill. State Fair" over "1903," in beeswax. At the left of the center was comb honey in a pyramid, and at the extreme left candied honey; at the right of the beeswax display were observation hives of bees.

Mr. Poindexter had no candied honey. He had the full amount for scoring of comb honey, but it was not removed from the shipping-crates. At the left front of his display were bees; next a snag of a tree made of beeswax representing a bee-tree. At the center of the exhibit was a glass case covering a figure of a beautiful woman made of honey, and these words attached: "Boys, I'm your honey!" At the right was a jar of honey in which floated a miniature fish. He had a wonderfully amusing story that he told visitors concerning this, but we can not recall it well enough to reproduce it here.

Mr. and Mrs. Coppin also had no candied honey. The center was a pyramid of the fanciest of fancy comb honey in small cases of his own ordering, the honey being in 4x5 sections. On each side was extracted honey.

Jas. A. Stone & Son (Percy) had their beeswax in the form of a two-rail fence (round rails) in the front center of the display. The comb honey was on the lower shelves, arranged between the drop points of twelve diamonds of candied honey extending up and down between the jars of liquid honey.

These exhibits were all shown in the new $18,000 Dairy Building. It is a grand place for making exhibits—especially of liquid extracted honey in glass jars. Bee-keepers are certainly treated royally by the Illinois State Fair management. The premium list is fairly liberal, and Mr. H. J. Cater, the genial and competent superintendent of the department in which the apiarian exhibits are made, takes good care of all who come under his efficient supervision.

The Editor of the American Bee Journal had the honor of being judge of this great apiarian display, and the following shows the awards and premiums as made:

Display of comb honey—1st, A. Coppin, $20; 2d, Jas. A. Stone & Son, $15; 3d, Chas. Becker, $10.

Collection of labeled cases containing 12 or more pounds of white honey from different flowers—1st, A. Coppin, $8; 2d, Chas. Becker, $5; 3d, Jas. A. Stone & Son, $3.

Collection of labeled cases containing 12 or more pounds of amber or dark honey from different flowers—1st, Chas. Becker, $8; 2d, Geo. M. Rumler, $5; 3d, George Poindexter, $3.

Case of white clover comb honey, 12 to 24 pounds—1st, A. Coppin, $4; 2d, Geo. M. Rumler, $3; 3d, Chas. Becker, $2

Case of sweet clover comb honey, 12 to 24 pounds—1st, Chas. Becker, $4; 2d, George Poindexter. $3; 3d, A. Coppin, $2.

Case of basswood comb honey, 12 to 24 pounds—1st, Geo. M. Rumler, $4; 2d, A. Coppin, $3; 3d, Chas. Becker, $2.

Display of extracted honey—1st, Chas. Becker, $20; 2d, Jas. A. Stone & Son, $15; 3d, Geo. M. Rumler, $10.

Honey extracting on the grounds—1st, Jas. A. Stone & Son, $5; 2d, Chas. Becker, $3.

Frame of comb honey for extracting—1st, Chas. Becker, $5; 2d, A. Coppin, $3; 3d, Jas. A. Stone & Son, $2.

Display of candied honey—1st, Jas. A. Stone & Son, $20; 2d, Chas. Becker, $15; 3d, Geo. M. Rumler, $10.

Display of beeswax—1st, Chas. Becker, $15; 2d, A. Coppin, $10; 3d, Geo. M. Rumler, $5.

One-frame observatory hive of dark Italian bees—1st, George Poindexter, $4; 2d, Geo. M. Rumler, $3; 3d, A. Coppin, $2.

One-frame observatory hive of golden Italian bees—1st, Geo. M. Rumler, $4; 2d, Chas. Becker, $3; 3d, Geo. Poindexter, $2.

One-frame observatory hive of Carniolan bees—1st, Geo. Poindexter, $4; 2d, Chas. Becker, $3.

Honey-vinegar, ½ gallon, with recipe for making—1st, A. Coppin, $4; 2d, Jas. A. Stone & Son, $3; 3d, Geo. M. Rumler, $2.

Display of designs in honey—1st, Geo. Poindexter, $10; 2d, Chas. Becker, $7; 3d, Jas. A. Stone & Son, $5.

Display of designs in beeswax—1st, Jas. A. Stone & Son, $10; 2d, A. Coppin, $7; 3d, Chas. Becker, $5.

Amount of exhibitors' individual awards—Chas. Becker, $107; Jas. A. Stone & Son, $78; A. Coppin, $63; Geo. M. Rumler, $46; and Geo. Poindexter, $26. Total, $320.

◆

See Langstroth Book Offer on page 30 of this copy of the American Bee Journal.

Contributed Articles

Honey the Best Food—Digested Nectar.

BY PROF. A. J. COOK.

THE quotation from Gleanings in Bee-Culture, regarding Dr. Kellogg's opinion of honey, interests me. I read the original article with satisfaction, as I always feel that truth is safe, and if I am sure a thing is true, I always feel that any counsel to suppress it is ill-advised and mischievous. Dr. Kellogg says, "I consider honey as much preferable to cane-sugar as a food. It is practically a fruit-sugar, and is ready for absorption." Again, "Digestion of cane-sugar converts it into honey, so honey is practically cane-sugar already digested."

It will be remembered that when these sentiments were stated some years ago, there was a great furor created. The writer of the article was denounced in unmeasured terms by many, and even by two of the prominent editors of the country.

I remember, a few years ago, that a serious disease attacked the fruit-trees in a region of very profitable orchards near one of the cities of the country. The watch-cry was, "Hush up! Say nothing; property will be injured." I regret to say that this advice was followed, and I regret even more to say that many of the largest orchards changed hands. The presumption was that the purchaser knew nothing of the dangerous disease. Soon the orchards of this special fruit in that region were utterly ruined, and the place suffered a great back-set. Another city not far distant, adopted a very different, and, I think, a much wiser course. The cry was—not hush, but *publicity*. The people said, "Let us learn all we can, and combat the disease the as best we may." A few years afterwards I knew the fruit of a single orchard, in this latter place, to sell for many thousands of dollars.

It seems to me that one of the blessed uses of our Christianity is to teach and persuade people to let in the light.

Even if the fact, as given in the last statement above from Dr. Kellogg, were unfavorable to the bee-keeper's interests, I would not hide it. I am very strongly convinced that the bee-keeper, and also the editor, is wisest who takes for his motto, "Let on the light." I always admired Mr. Root in this respect. He never denounced this little piece of truth-telling. He, perhaps, might have been louder in urging that the truth never ought to injure any honest business. I think it might be put stronger—never will injure. Yet I did not feel like blaming him, for it may be better, sometimes, to be conservative even in matters of such import as stating truth.

The truth of the matter is just as Dr. Kellogg puts it. The nectar of the flower is not honey. It is virtually cane-sugar, slightly flavored with some organic extract from the flower. The bee gathers this nectar, mixes with it, as it passes the mouth, some digestive ferment from the large glands of the head and thorax, and thus converts it into a mixture of dextrose and levulose. This is honey. Dr. Kellogg says, "practically into fruit-sugar." I dare say this is correct, yet it is quite possible that this sugar of digestion is more suitable as a food, and may have important nutritive difference from the other sugars usually called glucose. If we eat starch or cane-sugar, we have to digest them. I know some very excellent physicians, other than Dr. Kellogg, who think that we are injured by eating so much cane-sugar. In the early days of mankind the principal sugar was honey. This was a great favorite. It was greatly relished, and for two important reasons: First, the body needed it; and what we need we crave. When we are thirsty we need water in the blood, and how we long for it, and are almost crazy if it is not forthcoming. The fact that children, especially, so long for sugar is reason sufficient that some kind of sugar is absolutely requisite in our food. The child craves candy because the body needs sugar. A very important function of the great gland—the liver—is to form liver-sugar. This is very like honey, and may be quite identical. It is, without doubt, just what the body needs. Before birth, we need even more sugar than the liver, then enormously large, can furnish, and so a prenatal organ—the placenta—helps the liver in this office of providing sugar. Thus, as I stated, our ancestors in the days before maple and the sugar from cane were produced, depended upon honey, and relished it, and could say nothing better of a country than that it produced richly of honey. How often we have in the Bible the words, "A land flowing with milk and honey," as the best thing that could be said of a land.

Again, honey was the only sweet at that time, and thus for a second reason our forefathers prized greatly this, the only sugar.

As the races of early times did not have to digest their sugar as the then sugar (honey) was already digested, the body was not fitted to digest cane-sugar. We can see, then, that very likely the eating of a very large quantity of this new product might cause functional disturbance. The body had to adapt itself to this new food. We know, to-day, that cane-sugar must be digested, as it is not found in the blood, and if injected into the blood, passes out unchanged, as the body seems unable to use it. There is some doubt as to just what digestive liquids do this work. It has been supposed that one of the elements of pancreatic juice—amylopsin, the same that digests starch—does this. Some think that it has been proved that the intestinal juices from two important kinds of glands in the walls of the intestines do this work. In either case there had to be adaptation to this new food. I do not feel, then, to take issue with the very able physician who once remarked to me that he thought Bright's disease was much more common than of old, and he believed the reason that this very fatal disease was victimizing more people than formerly was because of this inordinate use of cane-sugar.

Should not the bee-keepers, then, be quick to acknowledge the truth, that honey is digested nectar, and it is without doubt the safest sugar that we can eat? that in case we eat honey we are saved digestive efforts because the bees have done it for us? In their evolution, the bees were developed to do just this work, and thus are uninjured in the process. Indeed, the great glands in the head and thorax which secrete this digestive juice add materially to the argument. If we keep on eating cane-sugar as we are doing, and as we doubtless will continue, we will in time become perhaps as able as the bees to perform this function. We may not be so yet. Let us, then, urge that there is no sugar so suitable as honey for food. Let us urge that it be on the table at every meal, and let us encourage the children to eat it *ad libitum*. I think the bee-keeper is wise who makes free use of honey in his own family.

I thus feel assured that Dr. Kellogg is equally correct in the first quotation given above, and that honey *is a very safe food*.

THE GLUCOSE SUGARS.

There are several sugars that may be classed with honey. Chemically they are all alike, and in my lectures to my classes I speak of them all as the glucose group of sugars. In composition they are all alike, and are composed of 6 atoms of carbon, 12 of hydrogen, and 6 of oxygen. While they are chemically the same as honey, I feel certain that they have differences, possibly important ones. These sugars are liver-sugar, honey, sugar of digestion, honey-dew, fruit-sugar, and commercial glucose. I believe that the best of these are liver-sugar and honey. Probably the sugar of digestion would be equal except for the efforts in the body to produce it, especially if produced from cane-sugar. I am not sure but that fruit-sugar—the common sugar of all our fruit—and honey-dew, are not equally safe and valuable. The honey-dew from some insects is rank, probably from some other substances excreted by the insects that form it. Commercial glucose, or corn glucose, on the other hand, I do not believe wholesome, and, if I could avoid it, I would never eat any. I proved years ago that it was unwholesome to bees. We know that bees are not attracted to it if they can get other sweets. If there is much of it in our candy or syrups, or if honey is adulterated with it to any considerable extent, it leaves a brassy taste in the mouth, which is very offensive to me, and which, I think, would create general distaste for these adulterated articles, if the taste could be associated with the article. I often find candies that leave this objectionable taste in the mouth after they are eaten. The high-priced chocolate drops often give this taste, and I have been told by dealers that they are not favorites, though a little less cost may sell large quantities of them.

I said above that liver-sugar and honey were probably the best sugars of this group for human consumption. There is physiological ground for this opinion. These sugars are more readily soluble and assimilable than are some, if not all of the others. I hope that some day we will have a pure-food law that will kill the whole nefarious traffic in commercial glucose. Nearly all the articles into the composition of which it enters are fraudulent, and one dislikes even to think of it. There is, however, so much money involved in its manufacture, and so much profit in its production, that its demise will come only through the united and persistant efforts of all consumers.

CANE-SUGAR—FROM BEETS AND FROM SUGAR-CANE.

A word about cane-sugar while I am on this topic: It is often suggested that cane-sugar produced from beets is quite different from that produced by sugar-cane. It is also stoutly affirmed that the former is far inferior to the latter for fruit-canning purpose. This is not true at all. The sugars are precisely the same, and contain 11 atoms of carbon, 22 of hydrogen and 11 of oxygen. Of course, if either product is not perfectly refined it would not be pure, and would differ from other products perfectly refined, whether from the same or the other source. I think now that the sugars either from the cane or beet factories are very pure, and that there is little preference. When I first came to California, the use of beet-sugar—there is a large factory within sight of us—was generally denounced, as not fit for preserving fruit. I secured some and made a thorough trial, and we never had better success in keeping our canned fruit than we did that year. It only remains to be said that if our fruit fails to keep it is either because it was not heated sufficiently, or sufficiently long, or else that the can was not perfectly sealed.

We all remember that fermentation, like putrefaction, is the result of bacterial affection. We heat the fruit to kill the bacteria; we seal the can that no more may gain access. As has been frequently pointed out in the bee-papers, most bacteria are killed at less than boiling temperature, but many, if not all, of these minute vegetables (bacteria) have what is called a resting stage in which a sort of germ more tenacious of life, and far more difficult to kill, is formed, usually in one end of the bacterium. If these are present, even boiling will not always kill the germ. It may take several minutes.

I once had some maple syrup of very fine quality that showed the presence of germs. I boiled it, but the unpleasant flavor did not disappear. I then added quite a quantity of water and boiled for quite a long time, after which the unpleasant flavor seemed entirely absent, and the quality of the syrup was quite restored.

Los Angeles Co., Calif.

Report for 1903—Feeding to Stop Robbing.

BY WM. STOLLEY.

MY bees wintered without loss in the winter of 1902 and 1903, and the spring opened up very favorable for them. During the month of March they were out 15 days, gathering pollen and a little honey, but the month of April was much less favorable, and we had more or less freezing weather from the 13th to the 25th, followed by a severe freeze of 18 degrees Fahr. in the night of April 29th and 30th, which destroyed all bloom, and even injured trees permanently.

It took from 5 to 6 weeks after that before my bees recovered fully from the shock they received, notwithstanding the copious and frequent feeding "*in the open*" that I resorted to right in front of my bee-shed, which worked very satisfactorlly, and caused no trouble about robbing. In all, I thus fed 485 pounds of honey, diluted with about 400 pounds of water, to 34 colonies of bees. Thus I got my bees in fair condition, and ready to take advantage of the sweet clover and alfalfa honey-flow, which commenced the later days of June. But the entire season proved to be abnormal, wet and cool, and closed with an early but light freeze in the night of Sept. 16th and 17th, so that bees could find but very little to gather after that.

All these unfavorable conditions tended to curtail my honey crop greatly, and all the surplus in extracted honey I got from 30 colonies was 2750 pounds; and from 4 colonies in Heddon hives run for section honey, 297 well-capped sections, while 72 sections were but partly filled, and the bees were allowed to clean them up for next spring's starters.

My best colony run for extracted honey gave 175 pounds, while the best colony run for comb honey gave 105 sections capped; but on an average I got about 90 pounds per colony.

By reading the "Old Reliable" I noticed that many apiarists complain that their bees swarmed excessively last season, and my bees are no exception in this respect, since I had 17 swarms from 34 colonies. The last part of August I allowed myself an outing to the Hot Springs in South Dakota, where I remained about three weeks. On my return home I found that 2 more swarms had issued and had decamped, and that the entire apiary was in a fearful uproar, and robbing—caused by carelessly allowing the bees to get at some extracting-combs. Such wholesale robbing I never saw before in all the 24 years that I have been keeping bees.

Now, the question with me was, How is this fearful robbing to be stopped quickest? I reasoned thus: When bees get all they want they do not rob. During a good flow of honey they never rob. Ergo, if I cause a deluge of honey within their own hives they will quit robbing. Acting upon this theory I set to work, and hurriedly inspected all colonies, thus ascertaining approximately the amount of stores on hand in each brood-chamber, which I noted down. Next I made a calculation as to the amount of stores required, so as to give each colony about 30 pounds of winter stores. This done, I prepared 300 pounds of dark, fall honey by warming it properly, mixing in sufficient hot water to make it of proper condition for fall feeding—and now for the attempted cure:

With the approach of the setting sun I tipped *all* hives backward, and, according to my prepared memorandum I proceeded, and poured the quite warm liquid out of a gallon measure right into each hive. Thus some colonies got but ½ gallon, others one gallon, and a few 1½ gallons.

The next morning, quite early, I let all hives down and put on entrance-blocks, regulating the size of the entrances. I am glad to say that this procedure stopped all robbing, and my bees, at the same time, were properly supplied with sufficient stores for wintering in quick order.

A week later (working only towards evening, and under suitable conditions), I once more inspected each colony very minutely as to their queens, and at the same time equalized stores where needed, and thus every colony was ready to be packed for out-door wintering in the open bee-shed, which was accomplished by Oct. 20. I now have 36 colonies winter-packed in double-walled hives, in the bee-shed; 3 nuclei with fine, young, extra queens, in single-walled hives, in the cellar, which holds the temperature at 50 degrees F. in the coldest zero weather; and 5 colonies in Heddon hives in a specially prepared winter vault—*the best of all* for wintering bees. Hall Co., Nebr., Nov. 22.

Convention Proceedings

THE COLORADO CONVENTION.

Report of the Proceedings of the Colorado State Bee-Keepers' Convention, Held in Denver, Nov. 23, 24, and 25, 1903.

BY H. C. MOREHOUSE, SEC.

(Continued from page 8.)

H. C. Morehouse then read the following paper on,

HOW CAN THE STATE ASSOCIATION BE MADE TO BETTER SERVE THE INTERESTS OF ITS MEMBERS?

In choosing this subject for discussion, I do not wish it to be inferred that I underrate, or do not appreciate, the magnificent work that the Colorado State Bee-Keepers' Association has accomplished for its members in the past. I have chosen it because I believe that the sphere of its usefulness and influence can be enlarged, and because I have some recommendations to make to the members along that line.

The record of the Association, during its 15 years of corporate existence, is one that may well cause our hearts to dilate with honest pride and enthusiasm. Numerically we have the largest State organization of bee-keepers in the United States. It has taught us the power and value of organization, and to-day we are better organized than any other rural industry, and there are several subsidiary organizations in the State that are directly or indirectly offshoots of the State Association, and that have contributed very materially to the advancement of the bee-keeping interests of Colorado.

The foul brood law, the law forbidding the spraying of fruit-trees while in bloom, and the pure honey law, are all products of our State organization. The enforcement of these just measures has saved, and will continue to save, the bee-keepers of the State many thousands of dollars. In respect to legislation, our Association has accomplished more than any other bee-keepers' association, not excepting even the National.

The past two seasons have been hard on bee-keepers, and on bee-keepers' associations as well. The season of 1902 approached the nearest to a total failure ever known in the State of Colorado. The present season, while not so bad, was away below the average. The effect of these two off years has been to cut out nearly all surplus revenue from the bee-industry, and the bee-keeper, in order to make both ends meet, has been compelled to practice many petty economies undreamed of in the palmy days gone by. Strange to say, many of them began by allowing their membership in the State Association to lapse. The financial receipts of the Association during the past year have been very light, while the expenses consequent upon entertaining the National Association, and preparing and forcing the passage of the pure honey bill have been very heavy, not only draining the treasury of its accumulated surplus, but several unpaid bills are staring us in the face; besides, we are powerless to furnish the funds necessary to a proper enforcement of the law now on our statute books, providing for the punishment of adulterators of honey.

The greatest need of the Association to-day is more paid-in-advance memberships, and a revival of interest and enthusiasm among those who are now in good standing upon its books. Hence, my first recommendation is that each member appoint himself a committee to secure new members. The larger the Association the greater will be its power and influence, and there is no use in trying to run the Association and conduct its work without money to pay its necessary and legitimate expenses. We can and do hold our annual meetings without incurring very much expense, but that is about the least important of the many functions of the Association. In a State that boasts of 3000 bee-keepers, at least 1000 of them ought to be patriotic enough to join the State Association, if the matter was properly presented to them.

I have often thought that the State Association could be of greater benefit to its members by gathering and furnishing them with reliable crop reports during the crop season. I have heard bee-keepers say they would be willing to pay $10 per season for such service, and know they are getting the truth. Such reports would cost something, and they would be worth something, but if the State Association did the work it could be done with comparative cheapness. This is a matter worth thinking about.

During each biennial or extra session of the Legislature, the State Association ought to maintain a legislative committee in Denver (resident in Denver, if possible, to save expense), whose duty it would be to watch the trend of legislation, and oppose vigorously any threatened legislation inimical to bee-keeping interests. The expense need not be great, and it might, sometimes, prevent the sneaking through of legislation that would be very hurtful to the bee and honey industry.

The pure honey law should be amended to the extent that all fines collected from violators of the law should be paid into the office of the State Dairy Commissioner, to be used exclusively for the purpose of enforcing the law. In this manner that branch of the office would soon be self-supporting.

I think it would be a great benefit to the bee-keepers of the State if the Association would publish an annual year book, containing the foul brood law, the anti-spraying law. the pure-honey law, directions for treating foul brood according to the latest approved methods, a brief history of the prosecutions brought under these various laws for the protection of the bee-industry, and other matters of general interest to bee-keepers might also be included. Such a book, issued in pamphlet form, and containing 20 to 24 pages, on the basis of a thousand copies, would cost about 2 cents each. Perhaps enough advertising could be secured to defray the whole cost of the edition.

These are only a few suggestions looking to increasing the usefulness of the Association to its members that have occurred to my mind. I trust that others will make additional suggestions, and that the whole matter may be thoroughly discussed, and if thought best that some definite action be taken.

H. C. MOREHOUSE.

Mr. Working—I wish to emphasize the importance of publishing such a year book, containing the Association history of the current year. Who knows fully what the Association has done this year? It would be especially valuable to put in the hands of people who want information, and to give to reporters.

Mr. Morehouse—I think such a book, put in the hands of the bee-inspectors for distribution, would increase the membership of the Association.

F. Rauchfuss—I am often asked, "What are the inspectors doing?" The law requires the inspectors to report yearly to the State Association. I often found difficulty in getting proper reports from them when I was secretary. Their reports should all go in such a book, and if they did not report properly, the fact should be mentioned, too. Hence, it would be an incentive to them to fulfill their duty. I am in favor of such a book.

Mr. Gill—It would be something new and progressive, and I think we could well afford it.

Mr. Rhodes—I move the matter be referred to an advisory committee, consisting of the Secretary, F. Rauchfuss, and D. W. Working. (Carried.)

A letter was read from Manager France, of the National Association.

Mr. Rhodes—I move this be referred to a committee to report during this session as early as possible. (Carried.) H. Rauchfuss, J. N. Cornelius, and F. H. Hunt were appointed as the committee.

J. B. Adams, F. L. Thompson, and J. Cornelius were appointed a committee on Resolutions.

FOUL BROOD—CAUSE AND CURE.

Mr. Aikin—I wish to add about the comb of foul brood that is on exhibition here. I do not just understand what the inscription on the top-bar means.

Mr. Francis—The bees of a diseased colony were shaken off on starters and one of the original combs kept. That is it.

Mr. Gill—I wish to ask the opinion of the members on this point: Last year I had 75 cases of foul brood in one yard, not bad, but just developing. At the foot-hills I had an apiary that had wintered poorly, giving me a lot of combs. I shook those 75 colonies on full combs during a heavy flow of honey, so heavy that scarcely any smoke was needed. What do members think the result was? The original colonies showed the disease very slightly.

Pres. Harris—When a man has one smallpox pimple, he's got the smallpox!

Mr. Gill—Just two cases of the disease appeared, and they showed only one cell a piece.

Mr. Aikin—To what extent were they manipulated in shaking?

Mr. Gill—The new hives were set on the old stands, and the bees shaken off vigorously, so that they were nearly drowned in the new honey shaken out with them, between the hours of ten and two.

Mr. Adams—I should say they might come out all right and they might not.

H. Rauchfuss—I think there was no chance for those bees to have diseased honey in their sacs. They get foul brood by robbing now or next spring.

Mr. Adams—Suppose a nurse-bee, which had just filled its sac before the shaking was shaken off among the others, and deposited its load in the new hive. It might take three years for the disease to develop.

Mr. Gill—There was precious little sealed stores in the hives, and those that had any were shaken off on starters, and not on combs. But even in that event there would be about one chance in ten thousand that a nurse-bee would transmit it.

Mr. Aikin—My opinion is, Mr. Gill is pretty nearly perfectly safe if the disease was just starting. But if he would undertake to shake on combs in any other condition than those he mentioned, he would be pretty sure to have it to do all over again. If the average owner of bees undertook to follow Mr. Gill's example, you can imagine just how he will do it. He will be sure to manage so as to have his bees scattering into adjoining healthy colonies, and taking in infected honey with them.

Mr. Porter—I had some colonies close together on a platform. One of them became badly affected during the flow. I shook them off onto starters, and some off the bees ran along the platform and entered another hive. Of course, I felt badly about it, but, after all, the other colony did not take the disease. Still, I feel about foul brood as Mr. Lyons did in a similar discussion in one of our meetings, when he jumped up and said, "Don't monkey with foul brood."

Mr. Adams—Why not produce a honey-flow by feeding? If not, why not?

Mr. Gill—Because you can't get the bees to do as you want them to. You can't get the conditions the same, so that all the bees will be handling the feed.

I remember that remark of Mr. Lyons, but Mr. Lyons has monkeyed with foul brood since then, and the result is he has some more now to monkey with. No amateur should get this method in his head to go by. I am sorry I said anything.

Mr. Porter—This season I had a good many cases similar to those 75 with the disease just starting. It made me feel blue, and I began to think I would have a hard time getting rid of it. I shook one yard, and the other yards were delayed, as the flow was just coming on. But foul brood did not further develop in the yards not shaken, though the ropy consistency and the turning brown were present in one or two cells per hive.

Mr. Aikin—A few years ago I had a foul colony in my home-yard. I set a hive beside it containing a comb with a little healthy brood and the queen, and covered the entrance of the old hive with wire-screen, and fixed a cone so it would empty the bees from the old into the new hive, according to the Baldridge method. The plan succeeded. Sometimes I do refrain from saying things in convention for fear of misleading, but I will say this, that sometimes when a foul-broody colony is next to a healthy one I take it away and set it beside another in another part of the yard, and in a week or two beside another in another location, and so on. In this way it gets so depopulated, and so little honey is gathered by it, that there is not much of anything left of it at the end of the season but the foul brood, and then I attend to it. I have also shaken foul-broody colonies, when the day is so far advanced that every bee is full of nectar, right back into the same hive on starters, taking all their combs away. As for myself, I have not that intense dread of foul brood that has been alluded to. Usually, in my yard, a robbing of one only goes into three or four out of a hundred. That percentage is not very large. In one instance I discovered ten colonies dead of foul brood three miles from one of my yards. They had fixed four to six in that yard of mine. I have had several such cases. Where one case develops in one year, from five to ten will in two years, when it is let alone. Where one colony would be badly foul the first year, I have had 10 colonies that were slightly foul the first year and badly the second. When there are yards of 10 to 30 colonies within reach of your bees that get badly foul, then look out.

Pres. Harris—Are not the conditions different with different colonies? I have known people to get among smallpox cases without being vaccinated and not take it, while with others may they not take it because they are just in the condition to? Is it not so with foul brood?

Can or will foul brood be carried or distributed by any other means than through honey?

H. Rauchfuss—I think only through honey. Mr. Aikin shook bees right back into their old hives, and if they had no brood-combs it was all right. You can shift bees from one hive into the other and be perfectly safe. You can put the old hive over a bee-escape on top of the new hive, and be perfectly safe. I have transferred many that way by using a Porter bee-escape, and allowing no cracks in the upper hive. There should be no gunnysacking used above, as the bees will gnaw it and make fuzz, which will stop the escape. Perhaps it would be better for that purpose. to have more than one escape in a board, as one escape may become clogged with a dead bee, though I have never tried more than one escape. Once in awhile I found it stopped up. I never found that the disease was carried down to the hive below, though sometimes the upper hive was left on a month later than it should have been. It is not as contagious as we think. It has to be carried in the honey. The bees that go into the new hive don't carry the old hive with them.

Mr. Rhodes—I have my doubts about that position. Smallpox can be conveyed without contact with the person. I remember a case in which a postmaster, by request, read aloud a letter from a person sick with the smallpox. The postmaster took the disease and died, though he was many miles away from the source of infection. Our professors make a culture of foul brood, and inoculate several other successive cultures without honey. During the early development of foul brood in Colorado it was very virulent, just as bad as it could be. The same is true of other contagious diseases. It may be from the condition of the germ, or the patient may be more susceptible, but I am satisfied that it may be communicated otherwise than through honey.

Mr. Adams—Somebody says it may be conveyed through pollen, fed by the nurse-bees.

Mr. Aikin—That would not be different. Pollen comes under the same head as honey. The disease is a disease of the larval state. Unless a spore gets into the system of the larva it is not going to have foul brood. The only way it gets it is by feeding. We have all had cases in which the combs on one side were thoroughly rotten with it, and the colony had moved over to the other side and established its brood-nest there, and it was perfectly clean. The point is, the disease must be introduced through the food into the larva. Making new cultures is just the same thing as putting it into the larval bee. Therefore, I say, that probably 999 cases out of 1000 contagion is by food. But we must be careful in applying this. I said you could shake bees into the same hive they had before and have them clean. But suppose the bees that were shaken up and full of old honey get to flying around and entering adjoining hives, you have not accomplished the object. Especially will they do so if the new hive is different in appearance from the old one.

Mr. Gill—Smallpox and foul brood are hardly parallel. That postmaster who took it was in a recipient condition. It is possible for 12 or 15 diseased colonies to be in the neighborhood and be robbed by strong colonies without communicating the disease at this time of year. If ten days or so of severe weather follows immediately, the bees will cluster up and consume every bit of the honey robbed, and spring will find them healthy.

H. Rauchfuss—It is wrong to *shake* off bees in transferring for foul brood. They are taken out of a hive that, to them, is in normal condition. After being shaken off and flying around they return and find a hive that is not the same, and the hive sitting next, that has brood, seems to them more like home, and many thus go to other hives. It is the same with making forced swarms; shaking causes many to go elsewhere, and it ought not to be done.

Mr. Frances—Is it not all right to use the old hive again, with starters in it, to shake them in front of?

H. Rauchfuss—No, because the inside of the hive is different.

Mr. Harris—Might not the foul brood develop sometimes in a light form? In Georgetown, in 1877, the smallpox broke out in a very severe form. About every one that took it died. In Mesa County we have had it in a light form. Conditions in surroundings may have an influence.

Mr. Gill—Is it not a fact that foul brood is a progressive disease, mild at first, and bad later?

H. Rauchfuss—Is it not possible that one larva might catch it and not die, while another would catch it and die?

Mr. Adams—Several times I have known of colonies badly diseased being robbed without imparting the infection. But that was at a time of year when there was no brood.

Mr. Aikin—If your bees have foul brood, and can't tend to it right away, carry the infected colonies to a corner of the yard by themselves, or to a special yard reserved for that purpose—a pest-yard. But don't handle it among the others, even in a heavy flow.

H. Rauchfuss—*If* that is done at a time when bees are robbing, and there are not many young bees, the change of position will leave the colonies weak, and exposed to attacks by robbers.

Mr. Aikin—Don't do it except during a honey-flow.

Mr. Porter—Have any of the members observed foul brood as a disease of the bees as well as of the brood? Mr. Benton's pamphlet speaks of it as a disease of the bees and brood, and Cheshire says the spores are found in the bees and the queen. I have made my home lot a pest-yard for diseased colonies, as there are no other colonies there. I brought one small colony home and put with it the brood from three others, so that in a short time it became of immense size, and also became very foul, so it could be smelled outside. Pretty soon I noticed every day 50 to 100 bees straggling around on the ground outside. They would unite in a little cluster on the grass in the evening, and in the morning they would be dead. Finally, I shook the colony onto starters, and after the third day there were no more stragglers. So I am quite satisfied that foul brood is a disease of the bees as well as of the brood.

H. Rauchfuss—I don't think that is conclusive. I have had plenty of bees acting the same way that had no foul brood at all.

Mr. Porter—If the bees got well after shaking that is proof. That occurred about the first of last August. I have seen no paralysis this season.

Mr. Gill—I have had a case of paralysis that was similar. I don't know whether it was from excess of pollen, or a certain kind of pollen, but I think it was bad nutrition. It was certainly a condition of the alimentary canal. When they got food from a new source because of shaking the paralysis ceased.

A Member—Paralysis occurs only in the spring.

H. Rauchfuss—I think some of it occurs later in the season.

Mr. Lindza—Eighteen years ago I had a few colonies on the dry prairie, six miles from any others. They took the foul brood from an empty hive I got elsewhere.

Mr. Gill—When did the first foul brood arrive in Colorado?

Mr. Lindza—The first I knew of was 18 years ago, among the bees of Dave Wolcott.

H. Rauchfuss—It would be difficult to find out, as the first bees that had it simply died out without it being recognized as foul brood.

Mr. Spencer—Under what conditions will a colony develop foul brood the first time? It must have a starting point.

H. Rauchfuss—We might as well ask where does the first corn come from? or where do we come from? But you can't raise corn unless you plant corn. It is impossible to generate it; chilled brood will never develop it.

Mr. Adams—A neighbor of mine was positive that he could develop foul brood from chilled brood. I told him I would give him $10 if he could. He tried his best, but he had to admit that he could not.

A Member—Give a plan for managing colonies that are being run for extracted honey in districts where foul brood is prevalent, without spreading the disease.

H. Rauchfuss—It is not a good plan to produce extracted honey in such a district.

Mr. Adams—Don't run a badly infected colony for extracted honey, but keep it separate.

(Continued next week.)

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Lonesome for Bee-News.

I am still at the hospital. Providence permitting, I will start for Florida in a few days. Mr. Harrison, who is an invalid, accompanies me; also our daughter Lucy. I can not read the American Bee Journal now, but am in hopes to be able to do so before long. I'm lonesome for bee-news.

Peoria Co., Ill., Dec. 23. Mrs. L. Harrison.

It would seem from Mrs. Harrison's card that the operation had proved successful, and she was soon to have the use of her eyes again. This is welcome news to her bee-keeping sisters, who hope she will not have to be "lonesome for bee-news" much longer.

For Colds, Coughs, and Chapped Hands.

I am delighted with your department in the American Bee Journal, and if you will allow me to be a sister for the time being, I will add my mite of information for the general good.

These are the days when a "hot toddy" at bedtime, after exposure to the inclemency of prevailing storms is not only a pleasant beverage, but may forestall the advent of serious trouble.

This is how to do it: Take a big spoonful of extracted honey, put in a quart mug, add the juice of half a lemon (or a teaspoonful of good vinegar will do nearly as well), pour upon this boiling water, stir, and drink warm as possible just before jumping into bed. In ten minutes you feel as if in a Russian bath—exactly what you need to break up a bad cold or congested lungs. It is good, and, of course, perfectly harmless to old and young.

Talk about "two-lip" salve for chapped lips! Two tablespoonfuls of honey, one of finely chipped camphor, a small piece of wax, all thoroughly heated together, and let cool, is the finest application for all sorts of chaps—hands, face, etc., and for burns. Well, you just try it.

You know how *we* ladies often get hurt, cut and scratched, especially about the kitchen. Well, a sticky salve made of equal parts of honey, camphor and rosin heated in a pan of hot water—that is, the ingredients put in a tin cup, and the cup into a vessel of boiling water, well stirred and cooled ready for "business." Have that cup handy; it will be in frequent demand. A clean rag wrapped over it is an additional protection.

Let me tell it again: A pint (in that proportion) of honey and a tablespoonful of spruce-gum, pounded fine, dissolved in the honey, makes one of the very best cough-balms to sore throats or lungs known. Dose, a teaspoonful every hour. It exactly fits grandma's case for that racking cough, and little Ethel won't have to be coaxed to take it—it is so good. My, what a blessing is honey, if the people did but undrestand its benefits.

Did I hear you say, "Hold—enough?" Well, then I'll quit. With compliments of the joyous season.

Emm Dee.

The sisters will, no doubt, feel like giving a rising vote of thanks for the valuable suggestions given by Emm Dee. It may be something of a shock to some of them to be told to take a hot toddy, but when they find out that it consists of nothing more dangerous than extracted honey, lemon-juice, and hot water, it will be all right. I think they will heartily approve of such a *toddy*.

When he comes with such a bundle of helpful things, Emm Dee may always feel just as sure of a cordial welcome as if he were Emma Dee.

Smoking Bees.

On page 838 (1903) Mr. John Kennedy says, "Beginners, and especially lady bee-keepers, generally use too much smoke." Does he speak from observation, or just on general principles? I was not aware that lady bee-keepers used any more smoke than the men. He further says, "You can handle bees so as to require little or no smoke." To be sure, you can (that is, some bees), but if your time is very valuable does it pay to use too little smoke? I once went to one of the out-apiaries and forgot my smoker, consequently I either had to work without one or go back home after it. Rather than take a five-mile trip for it, I worked all day without the smoker. I don't remember that I received so very many stings, but, dear me, I had to be so very careful of my every movement, so as not to irritate those bees, that it was a very long and tedious day, and you may be sure I did not forget my smoker again.

A puff or two of smoke at the entrance, and again over the top of the brood-frames as the cover is lifted, may save you from having to give, and the bees from having to receive, a good deal more smoke; for if a colony is once aroused it requires usually a good deal of smoke before it is subdued. At any rate, I will take my chances on the ounce of prevention rather than the pound of cure.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

SLAUGHTERING ROADSIDE TREES.

Yes, Prof. Cook, let's plant trees by the roadside; but how about those everlasting telephone lines and electric roads that slaughter the ornamental trees after they have become things of beauty and of joy? Might not our legislatures profitably put some sort of a limit to such hideous slaughter? Page 760.

"SOME EXPERT OPINION" ON LANGSTROTH FRAME.

And here, risen from the grave, is the old-fashioned symposium set of answers to a question. The none too spiritual Solomon, in a grandly, beautiful passage, tells how everything has its time, and everything is admirable in its time—but didn't think to mention that there was a time to rise again. Birth, and death, and slaughter in his mind readily, but somehow not resurrection. Well, here on page 770, is a welcome and timely resurrection. We hailed the birth of the thing with general acclaim, when the defunct Apiculturist started it so long ago. It wore by degrees—got threadbare by degrees—wore out—all tired of it—decently buried. Already "the heavens be changed" (to quote Job—more spiritual than Solomon); and here behold our department ready for a new term of useful life!

And, meantime, the Langstroth frame appears to have been holding its own, if not a little more, since it was questioned about last. About 17 for it against 10 to all others. Of the 10 about 4 are for a long, shallow frame—and no other three in a class. The growth of sentiment in favor of the very shallow frame is not at all huge; but apparently it does grow some.

CALIFORNIA NEW-COMERS AND OCEAN WATER.

So the self-renunciatory Californians bid the new-comer take water out of the Pacific Ocean, just as if the stuff was free! Page 762.

SWARMING AND NON-SWARMING QUEENS.

Methinks, deciding the relative rank and real value of the queens that swarm as compared with the queens that don't swarm, is one of the most difficult things we have to do. If it's rattleheadedness that causes the swarming, of course we don't want it. Very doubtful if it is *always* that. If a higher order of vim, against unfavorable weather and circumstances, puts them above the swarming level when all others keep below it, it seems rather hard to condemn them just because for one year the surplus account figured smaller—and go to breeding from something with less natural vigor. Page 762.

ONE IN 10 FOR THE NATIONAL.

Modest request, truly—that one in ten of the bee-keepers that take the papers shall also join the Association. Keep agitating and I guess they will. Yes, and here's my own membership out, or nearly so, and I hadn't thought of it for a long time—and wasn't likely to. Make us see our duty big and often, somewhat as we have to see the last new cereal in the newspapers. Page 755.

ON INDOOR WINTERING OF BEES.

As to that mild two weeks in November, I don't believe a colony outside consumes any more than when inside. May be I'm all wrong there. And some more of the editorial reasoning on page 755 I am not quite inclined to accept either. It's not the abstract *length* of the confinement that counts, but the number of days after they get to stirring and eating more freely than their first style of deportment. I suspect that that first and very desirable period of placidity is variable, variable to a large extent, and that how to make it as long as possible is one of the most important wintering problems left for us to solve.

THE COLOR FAD IN HONEY.

I can support Mr. Pryal, that the demand for extreme whiteness in honey is somewhat a fad, and likely to moderate eventually. But one consideration comes in there which will hinder a little. While an amber honey, or even a dark honey, may be better than a given white honey, the honey from the same species of plant varies a good deal in color, and *it's best when it's whitest*. Basswood honey, for instance, is much better when it is nearly water-white than when it is yellow. Page 757.

DISINFECTING FOUL-BROODY HIVES.

So the smell of foul brood is to the smell of black brood as old glue is to rotten apple.

I think page 759 suggests a style of treating hives that if not new is near enough to it to be the better for repeating. Premising doubtless that the inner surface is scraped entirely clean, brush it over with a mixture of gasoline and bisulphide of carbon—brush it in such a free way that part of the fluid must needs soak in before it evaporates—and one-quarter bisulphide to three-quarters gasoline will answer. Don't trust too much to so green a doctor as I, but I should call this a good way to do.

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Dr. Miller's New Year's Greeting.

I am sitting at my typewriter, coat and vest off—I'm not always clad in such a summery manner in the middle of winter, but often warm up at my work—and was just about to attempt to answer the first question appearing before me for 1904, when it occurred to me that this being the first day of January I might at least wish a Happy New Year to all the good friends who honor this page by looking over it. To be sure, this may not appear in print until after the first number of the Journal for 1904 has seen the light, but, at any rate, I'm taking the right day to utter the wish.

When a man doesn't enjoy his work there's a misfit somewhere. However much I may have come short in doing satisfactory work in this department, I am sure I'm not a misfit at least to this extent, that I have thoroughly enjoyed the work. I like to talk about bees and tell what's the best thing to do with them, and only wish I knew more, so that I could tell more The many kind words that have come to me from time to time have cheered me more than I can well express. If I should ever live to be old enough I suppose I won't care for kind words, but at my time of life they are greatly relished. The only regret is that I cannot reply in kind, but hope you will take this brief acknowledgment in lieu of a personal reply.

So, on this first day of January, in the year of our Lord one thousand nine hundred four, I am heartily wishing you, my good friends of the Journal family, a very Happy New Year. C. C. MILLER.

[The foregoing from Dr. Miller did not arrive at this office in time for it to appear in last week's issue. However, its kindly spirit and grateful wishes will doubtless be just as acceptable to all as if they had arrived "on time."—EDITOR.]

Cellar-Wintering of Bees Short of Stores.

I am a beginner, and also a new subscriber to the American Bee Journal. On December 5, I bought 4 colonies of Italian bees in dovetailed hives. These bees were apparently in good condition, but had almost exhausted their winter stores. I put them into the cellar, but as soon as I started to feed them they became uneasy and flew around the cellar. I closed the entrances with wire netting, and fed each of them 7 pounds of sugar (made into syrup) with a Miller feeder. I then put them in one end of the cellar, with a curtain across to keep out what little light came in. After they became quiet I removed the wire and turned the bottom-boards to give them more ventilation, and they have remained very quiet ever since. I see in the Bee Journal that you advise feeding sugar syrup only when the bees can fly.

1. Please give the reason.

2. How many pounds of sugar would you feed a fair-sized colony to winter them in the cellar?

3. How many pounds when wintering outside?

The cellar in which I have these bees has a cemented-bottom, and a hot-air furnace in one end. The temperature varies from 38 degrees F. to 50 degrees F. So far, the end in which I have the bees has kept about 50 degrees.

4. Have I any chance of bringing these bees through to the harvest. WESTCHESTER.

ANSWERS.—1. You have yourself partly answered the question when you say that feeding syrup made the bees become uneasy and fly around the cellar. There is also danger of diarrhea resulting.

2. 20 or more.

3. 30 or more.

4. Yes, if they will only *remain* "very quiet" they may pull through all right. Unless your thermometer marks too high, they would probably do better to be no higher than 45 to 48 degrees.

Arrangement of Sections in T Supers—Bees Dying in Winter.

1. What is the arrangement of sections in your supers, as shown in "Forty Years Among the Bees," page 19? As the outside dimensions of an 8-frame hive is 20 inches, assuming the super is the same the inside of super, if made of ⅞-inch lumber would be 18¼ inches, a row of 4¼ sections would be only 17 inches. What fills up this 1¼-inch space at the end of the super, as you, I believe, use 5 tins in place of section-holders?

2. I am wintering bees on the summer stands, in single-walled hives, and in cleaning the bottom-boards I find from a pint to upwards of a quart of dead bees. The colonies are the strongest and heaviest in the apiary. If it were weak colonies losing bees it would not be

hard to guess the trouble. But, as the weaker ones with half the honey are apparently wintering without much loss, I don't know what to think. The bees are Italians, and the frames are unusually full of honey. My guess is that the combs are so full that the bees have not room to cluster rightly. Please give what you think is the trouble, and also whether it would be a help or detriment to contract the entrance down to about an inch. IOWA.

ANSWERS.—1. I'm ashamed that you should have had the opportunity to ask such a question, for it should have been told in the book without being asked. As you say, four sections make 17 inches in length, and a little extra length is needed in the super, so it is $17\frac{3}{4}$ long, inside measure, and $19\frac{1}{8}$ outside measure. That's shorter than the hive; and a strip of wood is laid on the hive at one end, or else the strip is nailed on the super. The latter is the better way, only my wagon-box is of such size that the supers pack in it better without any strip nailed on. I thank you for calling attention to the omission.

2. I don't know what the trouble is—possibly nothing. For the stronger a colony is the more bees there are to die off. Still, a quart of dead bees before the close of December seems like a pretty heavy mortality. Combs too full of honey may be the cause, *if* there is not room for the bees to cluster below the bottom-bars. With a bottom-board two inches deep, it is doubtful that the combs can be too full, for in that case the bees have plenty of room to cluster below the frame; but if there is only half an inch or so below the bottom-bars, and the frames are solid full of honey, the bees will be obliged to spread up into the spaces, and with sealed combs between the layers of bees it would be hard for them to keep up the heat. After all, it is a rare thing that you will find the combs so full of honey that there will not be a plenty of empty cells in the lower parts of the combs.

◆

Distinguishing Pure Honey from Adulterated.

Is there any way by which I can tell adulterated honey from pure honey? All the honey I sell is stamped "Pure Honey," and I see honey in the market which I think is not pure. MICHIGAN.

ANSWER.—I don't know of any way by which you can certainly tell without having the honey analyzed. But if it is adulterated with glucose, you may readily distinguish the glucose taste after you have become acquainted with it, especially the disagreeable after-taste.

◆

Plans to Prevent Increase—Outside Feeding of Bees.

I wish to run my apiary without increase. I would rather diminish, and have several plans in mind.

1. When a swarm issues, if I cage or kill the queen and run the swarm back will it be likely to swarm again that year, if I destroy queen-cells in time?

2. If I cage the queen and insert her between the combs will the outside bees feed her? If so, and I keep her caged until I hear the young queen piping, then destroy the young queen and all queen-cells, will they be likely to swarm again?

3. If I unite I have a lot of brood-combs which are hard to keep until swarming-time unless left on the hive. Suppose I destroy one queen in uniting and set the queenless colony on top of the other, with a queen-excluding-board between. Then, when the swarm issues from any hive I take this upper hive off and set it on a bottom-board and put it in place of the swarming colony. Will the colony be likely to swarm again, if I destroy queen-cells at the proper time?

4. I have a few hives packed out-of-doors. If there should come warm spells through the winter that bees could fly out, would it be an advantage, or an injury, to set honey outside for feed? They may be short if they consume more than in the cells. IOWA.

ANSWERS.—1. Yes if you kill all cells but one you will likely end swarming for the season.

2. They will be sure to feed her, and it may, and it may not, end swarming. Localities differ, and it is worth while for you to make the experiment, for it may work all right with you.

3. Likely not.

4. If short of stores it would be an advantage, provided you do not start robbing.

◆

Preventing Other Bees from Robbing.

Is there any way to keep other bees from robbing mine?
MINNESOTA.

ANSWER.—Sure. Keep your colonies so strong they can defend themselves. Don't allow queenless colonies. Don't expose honey to start robbing. Don't open hives unnecessarily when no honey is coming in. You see, it's a matter of "don'ting" rather than doing, for if the colonies are queen-right and strong there is no danger of their being robbed unless there is some fool thing done on the part of bee-keeper. But remember that if you have more than one colony there is just as much danger of robbing from your own bees as from other people's bees.

◆

Trouble with Bottom-Starters.

1. I have tried your method of filling sections with foundation, but could not make the bottom piece stand upright. It would droop over, and lay down flat like a cabbage-plant under a hot sun. What do you do to make it stand upright?

2. How would it do to cut foundation in a triangular form, like a saw-tooth, fasten the wide edge of the foundation to the upper side of the section clear across, and let the lower point of the foundation rest on the bottom of the section? KANSAS.

ANSWERS.—1. Nothing is done to make the bottom starters stand up straight, and there is no trouble on that score. The starters are only $\frac{5}{8}$ of an inch deep; they are put in with a Daisy fastener, the bottom starter put in before the top starter, and the sections immediately turned over to fasten the top starter in. The work is usually done in cool or cold weather. If done in hot weather it might not work so well. Neither would it work so well, probably, with anything like the Parker fastener. I don't know how would be the best way with a Parker, but it might be something like this: Have the foundation pretty warm, and put in quite a number of bottom starters before putting in the top starters, setting each section upside down as fast as the bottom starters are put in, so they would cool off in place.

2. If you allow the foundation to touch the bottom, even at a single point, you will probably find that the starter will stretch sufficiently to make it sag to one side.

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FROM MANY FIELDS

A Very Good Honey Crop.

Not having a report of the honey crop from around here, I will write one. We had a very good crop this year. I had 8 colonies, spring count, and got 800 pounds of extrated honey, and about 200 pounds of comb honey in one-pound sections. I increased to 13 colonies.

There was quite a lot of swarming this season before it was expected. JAS. KANE.
Dubuque Co., Iowa, Dec. 14.

Oklahoma as a Bee-Country.

I have just returned, after a 30-days' visit, from Oklahoma Territory. While there I visited the Agricultural and Mechanical College, and Government Experimental Station, and am under many obligations to the professors and officers in charge for many courtesies shown me.

I was told that Oklahoma was not a good bee-country. The professor of entomology informs me they abandoned experiments in bee-culture, yet there is a bee-keeper in Ripley who has a large apiary, Ripley is near the Cimarron river, and bottom land is the only place where alfalfa does well. I think Oklahoma may be a good fruit country, although

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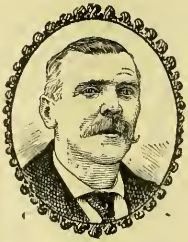

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fruit-trees take on a dwarfish appearance. I saw no pear-blight or evidence of codling moth and similar injurious insects. Price of lands range from $10 to $50 per acre.

W. P. Hogarty, U. S. A.

Wyandotte Co., Kans., Jan. 1.

Pollen and Foul Brood.

In every case in which foul brood has been examined by a man competent to undertake it, the pollen of a certain plant is always found. There are pollen-grains of different plants found in the cells of all healthy bees, but in every instance where foul brood has been examined the pollen of this one plant has been discovered, and is also found in the stomach of bees that have died of foul brood. Without being positively certain about the origin of these diseases among bees, might it not be the case that the pollen which the bees store away furnish nutritive ground for the bacillus growth, which takes its start from this one particular kind of pollen that is always found in connection with the disease? In other words, might it not be the case that stored pollen made a culture-field similar to that of a mushroom bed in which, when a grain of pollen from a certain plant (to me unknown) is introduced, the result is a microscopic growth which spreads through the entire bed, and this causes the disease known as foul brood? In other words, may it not be the result of the pollen of some one plant?

This would appear to be the probable cause as this characteristic pollen is always found in connection with the disease. I do not state this as a fact, I ask the question in regard to the possibility of such being the case. It would not necessarily mean that wherever this poisonous plant was found that foul brood should of a necessity follow, but it would show that if the conditions were right for the development of the bacilli, and that the introduction of this particular pollen produced the disease, it would be certain that we have found the cause. What do our scientific people think about it? Kane Co., Ill.

Eucalyptus for Arizona.

After reading Prof. A. J. Cook's article, on page 760, "Roadside Tree-Planting and Reforesting," I am of the impression that the eucalyptus or gum-tree would thrive and be a paying investment to the farmers of Salt River Valley, as they have all their irrigating ditches planted with cotton-wood (a very poor wood except for firewood.)

I see no reason why the gum-tree would not thrive along the ditches as well, or better than in California, where they plant on the hillside, or "any old place."

Why not have Prof. Cook "go us one better," through the "Old Reliable," and inform us of some reliable nusery-men in California where we bee-keepers of Arizona may send for seeds or young plants of the gum-trees that would be true to name, that we might give them a trial? I would like to try them on a small scale, to see how they would stand this climate, and I believe there are others that would be interested. L. E. Redden.

Maricopa Co., Ariz., Dec. 14.

[There is nothing to hinder some reliable California dealer or nursery man from advertising such seeds or plants in these columns. —Editor.]

Wintering Bees—Other Experiences

I will give to the readers some of my experience for the last season. I started in the spring with one colony of blacks; they were very weak, and on July 22 I put on one super with 27 4¼x4¼ sections, and the bees put in 18 full sections of nice honey. On July 30, I received a choice queen, and on that day I divided them, taking out 2 frames of brood and putting in 2 frames of full combs from hives where the bees had died the winter before. I put in about a quart of bees and stopped them in tight, let them stand for 3 days and then introduced the queen, using tobacco-smoke. On Aug. 30 the first bees flew, and in October the hive was full of bees and full of honey.

On Sept. 26 I got a swarm from a limb of

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an apple-tree; they had been on there long enough to make quite a piece of comb. Then I took 2 more combs of honey and pollen from the old hive and put new bees on, with 2 empty combs, and fed the lot with sugar syrup, until all had stores for winter, then I made outside cases and packed them the following way:

I put in 5 inches of fine hay, and then set the hives in, and filled to the supers all around as tightly as possible with same kind of hay, then tacked a piece of burlap on the bottom of the super, and set it on and filled that with the same, then covered to about the depth of a foot, then put on a good cover that was tight. I will report how they winter.

My old colony carried out its queen on Aug. 19; there were about 100 bees that seemed to crowd her along ahead of them, until they got her to the edge of the alighting-board, and then a few took her and went into the air with her, and that was the last I saw of her.

D. B. Boynton.

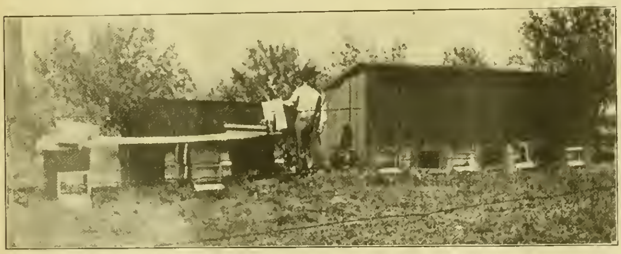
Oxford Co., Maine, Dec. 26.

A Good Report—Bee-House.

This has been a good year for bees here. I had 19 colonies, spring count, increased to 31, and have sold $450 worth of honey, and have $50 or $60 worth more on hand.

For 10 years I have not shipped a pound of honey; I always label it, and by square dealing try to increase the trade at home. I have sold 85 dozen quart-jars of extracted honey.

I send you a cut of my apiary; since that was taken I have built 3 more. I just started putting 8 hives to 16 feet, but found they lost too many queens. I have adopted 6 hives to 16 feet, with 4 or 5 distinct colors together. Bees in white or black hives will never mix, but white will within 5 or 6 feet. I have kept bees in bee-houses for 25 years with the best results. I use a 11¼-inch deep frame, usually 9 frames to the hive.



BEE-HOUSE OF IRVING LONG, OF LINN CO., MO.

I feel that a great deal can be done by working up home trade, and increasing the consumption of honey. A great many people think the nice comb honey is sugar fed to the bees, and I have sold hundreds of pounds of 5-pound extracting frames in direct competition with comb honey at the same price. At home we are known, and can sell good honey in anything if they only know it is pure and first-class.

In hot weather my bee-house is partly or entirely open at the top. This does a great deal to stop swarming, and I am troubled very little with stings or robber-bees. The bees winter better and are cooler in summer. The hives will last forever, and the bee-fixtures are right at hand. A good house, 6 feet by 16, costs about $25.00, and one good colony easily makes that every year.

Irving Long.

Linn Co., Mo., Nov. 20.

Problem of Honey Attracting Water

Does honey draw water unto itself from the atmosphere? I think I am perfectly safe in saying that there is no such thing as honey having power of itself to draw water from the atmosphere. Crystals and dry substances do absorb moisture from the air, but the same law in chemistry which furnishes moisture for the air would take from, and not add to, any liquid. Honey will become thinner in a moisture-laden atmosphere, and contains more water, but it will be at the expense of the other ingredients of that honey; or in other words, it is only a form of decomposition. Moisture is necessary for any natural decomposition. Honey, or any liquid or substance, if left exposed to the air will decompose to some extent. All natural decomposition of any substance is due to unseen vegetable life, hence moisture is necessary to favor the propagation of the same; and when any liquid absorbs moisture from the air it is merely an exchange of solid for water. Hence the said 100 pounds of good honey would weigh less after it became ½ water, and after that honey had been again evaporated down to good, thick honey, it would be less in both bulk and weight than when you first started.

Honey oozing out through the cappings is probably due, to some extent at least, to the gas caused by said decomposition.

This is the way I understand the problem. I am perfectly willing to stand corrected, if wrong.

J. E. Johnson.

Knox Co., Ill.

Report for 1903—Honey from Houses.

I will give my figures for 1903. I started with 12 colonies, and increased to 36, but I caught a number of swarms. I have taken off 2274 pounds of comb honey and 406 pounds of chunk honey; I got 12½ cents per pound for the comb, and 10 cents a pound for the chunk. I never saw such a honey-flow as we had this year. Our meadows and pastures looked as though a light snow had fallen, all summer. As to bee-trees, any person could find them. I found 37.

One of my neighbors asked me to come over and take the honey out of the side of his house, and one morning I went. His wife said she had brought a 10-gallon can to put it in. Here is what I got: One large

WEAK EYES CURED AT HOME.

The enormous charges specialists extort for treating the eyes can be saved by a simple but certain home cure which has not only saved dollars for thousands, but saved eye sight of inestimable value. The

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removes cataracts without the knife, at home, cures granulated lids, floating specks, scums, growths, sore and inflamed eyes, failing sight, or we refund your money. Send full description of your case and ask for our free booklet and advice.

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The book we mail for $1.20, or club it with the American Bee Journal for one year—both for $2.00; or, we will mail it as a premium for sending us THREE NEW subscribers to the Bee Journal for one year, with $3.00.

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we mail you free lots of farm seed samples and our big catalog, telling all about this oat wonder and thousands of other seeds.

JOHN A. SALZER SEED CO.
La Crosse,
F. Wis.

South Dakota.—The South Dakota Bee-Keepers' Association will hold its annual convention in the City Hall, in Yankton, on Wednesday, Jan. 20, at 2 p.m. All members are earnestly requested to be present, and a cordial invitation is extended to all who may be interested in bees and bee-culture.

J. M. Hobbs, Sec.

Yankton, S. Dak.

New York.—The annual meeting of the New York State Association of Bee-Keepers' Societies will be held in the City Hall, Syracuse, N. Y., Friday, Jan. 15, 1904. N. E. France, W. Z. Hutchinson, and other prominent bee-men will be in attendance. An interesting program is being prepared. All interested in bees are invited to be present. Special rates have been secured at the Manhattan Hotel for accommodations.

C. B. Howard, Sec.

Romulus, N. Y.

Minnesota.—The annual meeting of the Southeastern Minnesota and Western Wisconsin Bee-Keepers' Association will meet at Winona, Minn., at the Court House, in the County Commissioners' rooms, on Tuesday, Jan. 19 (and 20), 1904. A full attendance of the members, their wives and friends, is invited to this, our annual meet. All bee-keepers everywhere are cordially invited to attend.

W. K. Bates, Pres.

Stockton, Minn.

New York.—Mr. N. E. France, of Platteville, Wis., General Manager of the National Bee-Keepers' Association, has been secured by the Bureau of Farmers' Institutes to speak at a series of Bee-Keepers' Institutes in connection with the local bee-keepers' societies as follows: Canandaigua, Jan. 6 and 7: Romulus, Jan. 8; Cortland, Jan. 9; Auburn, Jan. 11; Oswego, Jan. 12; Amsterdam, Jan. 13; Syracuse, Jan. 14 and 15. The meeting on the 15th will be that of the New York State Association of Bee-Keepers' Societies.

C. B. Howard, Sec.

Romulus, N. Y.

washtub full, four 10-gallon cans, 2 large dishpans, and 5 pails. Now this may sound "fishy" to some, but I have a picture of it before it was taken out, and the comb is in plain view.

I have taken honey out of 7 houses this fall, and 6 of them averaged about 100 pounds each. I have my bees in sheds, and pack them in leaves for winter. I have done so for several years, and find it the best place I have ever tried.

Now about red clover queens in this State: When red clover has small heads we all must have red clover queens for they work on it splendidly.

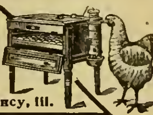
Well, I cannot handle bees without the American Bee Journal. H. GILBERT.

Jasper Co., Iowa, Dec. 18.

Poorest Honey Season Ever Known.

The past season here was the poorest for honey that I have ever known. King Solomon said that what has been will be again; but I do not want another poor season like the past, to be again. B. F. STONE.

Preston Co., W. Va., Dec. 25.



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32Atf Front and Walnut, CINCINNATI, OHIO.

HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, Jan. 8.—The new year opens with a quiet trade in honey, retailers having usually a supply from the stock laid in to make a good show at the holiday time. Prices are without essential change in No. 1 to fancy comb, which brings about 13c; very little doing in off grades at from 1@3c less. Extracted, white grades, bring from 6@7c, according to flavor and other qualities; ambers about 1c less; especially weak are those lacking in flavor and body. Beeswax steady at 28@30c.

R. A. BURNETT & CO.

CINCINNATI, Jan. 8.—The market on comb honey has weakened, as the supply has been larger than the demand. Fancy water-white, 14c; off grades, lower. Extracted, amber, in barrels, 5¼@5¾c; in 60-lb. cans, ½c more; alfalfa, water-white, 6@6½c; fancy white clover, 7@8c. Beeswax, good demand; 30c for nice.

C. H. W. WEBER.

PHILADELPHIA, Dec. 10.—Large lots of comb honey being offered from States that were not supposed to have much stock. Bee-men, as usual, wake up now to the fact that they want to sell their comb honey and push it on the market, thus breaking the price. If they would only offer their honey in September, they would get more for it and it would be better for the producer and dealer. We quote fancy white, 14@16c; No. 1, 12@14c; buckwheat, 12c. Fancy extracted, 8c; amber, 6@7c. We are producers of honey, and do not handle on commission.

WM. A. SELSER.

ALBANY, N. Y., Dec. 15.—Market very dull, and lower since the cold weather. Quotations have to be shaded, and concessions made to effect any quantity sales. H. R. WRIGHT.

CINCINNATI, Nov. 20.—The demand for comb honey is slower now than it was six weeks ago, owing to the enormous quantities offered on all sides. Fancy comb is sold in single case lots at 14c. The supply of extracted honey is big, although the demand is good. We are selling amber extracted in barrels at 5¾@6½c. White clover, in barrels and cans, 7½@8½c, according to quality. Beeswax, 30c.

THE FRED W. MUTH CO.

BOSTON, Dec. 21.—The demand for honey continues good, with an ample supply of comb, and a light supply of extracted. We quote our market as follows: Fancy white comb, 16@17c; No. 1, 14@15c; and practically no No. 2 to offer. Extracted, 7@8c, as to quality.

BLAKE, SCOTT & LEE.

KANSAS CITY, Dec. 30.—Instead of our honey market improving, it has grown worse as far as comb is concerned. The receipts have increased and fancy comb and No. 1 have been sold as low as $2.50 per case of 24 sections. We do not look for any improvement in prices before February, if then. We quote: Fancy white comb, 24 section cases, $2.60; No. 1, $2.50; No. 2, $2.40. Extracted, white, per lb., 7@7½c; amber, 6@6½c. Beeswax, 25@28c.

C. C. CLEMONS & CO.

NEW YORK, Dec. 4.—Comb honey is arriving in sufficient quantities to supply the demand, and, as to the quality, most of the white honey seems to be off color, more or less. We quote fancy white at 14c; No. 1 at 13c; amber, 11@12c; and buckwheat, 10c. Extracted, light amber, at 6c; white, 6½c; Southern, 55@60c per gallon; buckwheat, 5½c. Beeswax, 28@29c.

HILDRETH & SEGELKEN.

SAN FRANCISCO, Dec. 16.—White comb, 1-lb. frames, 13@14 cents; amber, 9@11c. Extracted, white, 5½@6c; light amber, 4½@5c; amber, 4@4½c; dark amber, 3½@4c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

Demand is not brisk and is mainly for the choicest and most ordinary, or for water-white and for dark honey. The latter is in moderate request from bakers for honey-cakes, which serves for this purpose as well as light honey, and is given the preference on account of cheapness. Present stocks are largely medium amber grades and these are moving slowly.

HONEY AND BEESWAX
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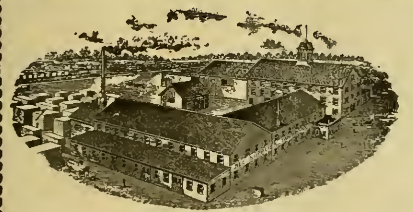

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TOO BIG FOR OUR PRESENT QUARTERS.
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We Have To Do This. We Lead.
In the new place nothing will be lacking. You will find a complete line of everything in the bee-line.
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are no better than those we make, and the chances are that they are not so good. If you buy of us **you will not be disappointed. We are undersold by no one.** Send for new catalog and price-list and free copy of THE AMERICAN BEE-KEEPER; in its thirteenth year; 50 cents a year; especially for beginners.

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ST. LOUIS, 1904.

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Why does it sell so well? Because it has always given better satisfaction than any other. Because in 26 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material.
We sell the best Veils, cotton or silk.

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Langstroth on the Honey-Bee—Revised
The classic in Bee-Culture—Price, $1.20, by mail.

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* * *

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All parts of our Hives are made to Fit Accurately. Perfect Workmanship and Finest Material. No trouble in setting them up. Our customers say it is a pleasure. We are not selling goods on NAME ONLY, but on their QUALITY.

Twenty Thousand Additional Square Feet of floor-space just added to our plant. We now have over Forty-Five Thousand square feet of floor-space. We certainly can take care of your orders promptly. Remember That.

* * *

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Our Acme Hive, the shallow body style, simple and cheap. Our New Wisconsin Hive, a Portico Front, and the same inside arrangement as the regular dovetailed.

* * *

One of Many.

NEW HAVEN, IOWA, June 27, 1903.

G. B. LEWIS CO., Watertown, Wis.

GENTLEMEN:—I must say something in regard to the goods you have sent me. They are very good, and I received them in fine condition and consider same cheap. Some people make their own hives, but I think this is a foolish plan when you can get goods like this well made, neatly finished and in such perfect condition. I have used 1000 sections and find everything all right. If anybody wants to know where to send for the best bee-supplies, tell them to write to me.
Yours for business,
BENNIE DIEDERICH.

* * *

Complete list of Agencies will be found in Catalog.

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C. DAVENPORT.

WINTERING BEES—OTHER TOPICS.
EDWIN BEVINS.

AMERICAN BEE JOURNAL

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WEEKLY—$1.00 A YEAR.

44th Year. CHICAGO, ILL., JAN. 21, 1904. No. 3.

(See page 36.)

Apiary of H. M. Carr, of Bosque Co., Tex.

Apiary of Hans Christensen, of Skagit Co., Wash.

Apiary of Theodore Steger, of Washington Co., Wis.

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"I have some of your hives in use, and I find they give more satisfaction than any other hive in the market. If all goes well I will be ordering more of them before long."
Cape Colony, South Africa. R. J. King.

⁂

The bee-fixtures that I ordered of you came to hand in good order, and are the finest work I ever saw. Every thing went together like the leaves of a book. The supers fit my Quinby hives perfectly, and are sure to give better satisfaction, although costing a little more than what I could have got them for from your agent in Portland, Oreg. Thanks for your promptness in filling my order for odd sizes. H. A. March.
Fidalgo, Wash.

⁂

"I have been using the fence separator, and find them much superior to solid goods. The 450 shallow hives you made for me are giving good satisfaction."
Vigo, Tex. J. E. Chambers.

⁂

I have just now unpacked and examined the goods sent by you, and am greatly pleased with the lot.
Scottsville, Ariz. W. H. Gill.

⁂

These hives have proven very satisfactory, and I now wish 25 more of the same kind.
Very truly yours,
Tecumseh, Mich. P. W. A. Fitsimmons.

⁂

While writing you this, I must say the hives I ordered of you were first-class in every particular, and not one mistake. F. L. Powers.
Artemisa, Cuba, W. I.

A. I. Root Co., Medina, Ohio. U. S. A.
Dear Sirs:—The shipment of hives and bee-supplies, which you sent me, arrived in excellent condition, and every one who has seen them, is delighted with the accuracy and precision of the workmanship of every detail, both of the goods and the manner in which the order was executed.
Yours very truly,
Cape Colony. Frederic T. Bioletti.

⁂

"People are beginning to change their bees to the Root hive. My trade being so much better this season than previous years." Yours for service,
Pennville, Ind. Alfred Grissom.

⁂

The A. I. Root Company, Medina, Ohio.
Gentlemen:—I am well pleased with your prompt way of doing business. The goods are just simply nice. Many thanks. Yours truly,
John D. A. Fisher.

⁂

The goods ordered have arrived, and are very fine, giving entire satisfaction, as is invariably the rule when ordering from you. Allow me to thank you for your promptness which I appreciate more this time than usual, as I needed the goods very much. I can get goods from your factory in about the same time that it takes to receive a reply from some parties at no greater distance. W. A. Klock.
Herkimer, N. Y.

⁂

Your chaff hive, the last one, is the thing. I had them out with no protection, not a fence or tree, and the north wind howling around them with mercury at 42 degrees below, and that wide entrance all open. I did not expect them to come through. It seemed that enough arctic cold would come in the entrance to freeze brass bees; but these came out strong in spring. S. J. Harmeling.
Marion, S. D.

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GEORGE W. YORK, Editor. CHICAGO, ILL., JAN. 21, 1904. Vol. XLIV—No. 3.

Editorial Comments

Out of the Honey and Bee-Supply Business.

It seems that a good many of our readers either have forgotten it, or else did not notice the announcement made in these columns, that on Oct. 1, 1903, we severed all our connection with the honey and bee-supply business; also beeswax. We are now devoting our whole time to the American Bee Journal, and find plenty to do, we can assure you.

For anything wanted aside from the American Bee Journal and bee-books, we respectfully refer our subscribers to the advertisements to be found in these columns. We believe every one of our advertisers is entirely reliable. If we did not feel so we would not advertise for them, as we are more than ever against all kinds of frauds and crooked dealing of every kind. Kindly patronize our advertisers, and when writing any of them, if you will also say you saw their advertisement in the American Bee Journal, it will be greatly appreciated.

Lectures on Bee-Keeping at Farmers' Institutes.

When work of this kind is done, why is not some one engaged for it who is an up-to-date bee-keeper? In the report of the New Jersey State Board of Agriculture appears a lecture given before that body, which lecture had been given at the various institutes throughout the State. Here are some expressions used in the lecture:

> "The average life of a working bee is about five weeks."
>
> "They have a queen-bee, and she rules them all, and as she moves majestically from cell to cell, is followed by a retinue of attendants who fulfill her every wish."
>
> "A bee's bite injects into the system formic acid."
>
> "Comb honey has one advantage over strained honey."

This lecture was delivered by Mr. D. Everitt Lyon, Ph.D., and some reporter or printer may have been responsible for saying "five weeks" instead of "six weeks," and "bite" instead of "sting;" but any up-to-date bee-keeper, even though untitled, ought to know better than to say "strained" instead of "extracted," and to talk about the queen ruling all, and being "followed by a retinue of attendants who fulfill her every wish."

Grading Honey by Quality.

Why is it that in most, if not all, the attempts at making rules for grading honey the matter of quality has been left unmentioned? It is of vastly more consequence that honey should be of the best quality than that it should have two cells less or more unsealed, or two cells more or less travel-stained; then why not make quality instead of looks the leading item in grading? Is it possible that until now no one has ever thought about it? Hardly.

Well, shall the rules be amended so as to make quality stand first? Very many will probably reply at once in the affirmative, but when asked *how* it shall be done, the reply will not be so prompt. The specific gravity has something to do with quality, and that can be measured in extracted honey, but not easily in comb honey. Besides, very heavy honey may be of very poor flavor. How are you going to measure flavor? What shall be the standard?

In defense of the Washington rules, and, indeed, perhaps of all other rules, it may be said that although no mention is made of quality, the matter is not utterly ignored, for "the honey is to be classified according to color, using the terms white, amber, and dark, and the color generally tells *something* about the quality.

It is easy to shy stones at the rules. Let the next one who does it please tell us *how* the amended rules should read.

Some Big Crops of Honey.

Some enormous crops of honey are reported as having been harvested by members of the National Association, although only part are reported. One is somewhat at a loss to know how to compare these, for some of the big crops are partly or wholly of comb honey, and plainly a thousand pounds of comb honey is worth more than an equal amount of extracted. Perhaps it is not out of the way to say that 1000 pounds of comb is equivalent to 1500 pounds of extracted. Figuring on this basis, and reducing the comb honey to terms of extracted, the crops reported that equal or exceed 50,000 pounds are as follows:

J. F. Crowder, Cal..	51,800	Emerson Bros., Cal.	80,000
N. E. France, Wis..	54,000	W. D. Moffatt, Cal.	80,000
W.L.Coggshall,N.Y.	57,500	W.T.Richardson,Cal	84,000
J. F. McIntyre, Cal.	60.000	L. E. Mercer, Cal...	100,000
Jos. Moffatt, Cal...	60,000	M. A. Gill, Colo....	112,500
J.C.Stanley& Son,Ill	60,000	H. H. Hyde, Tex...	122,500
T. F. Arundell, Cal.	64,000	M.H.Mendelson,Cal.	123,000
Wm. Rohrig, Ariz..	72,000	W. H. Pain, Haw.Is.	300,000

There is some room for believing that one of the ciphers should be erased from the last number, for 300,000 pounds of honey from 200 colonies hardly comes within the range of probability. Omitting that name, we still have 15 bee-keepers securing the equivalent of 1,181,300 pounds of extracted honey, or an average of 78,753 pounds each.

Doubling Shaken Swarms.

M. A. Gill reports in Gleanings in Bee-Culture that he uses two colonies of bees to make a shaken swarm, using onlystarters in the brood-frames, and that these mammoth swarms build 95 percent of their combs with worker-cells.

Sheet-Lead for Hive-Covers.

This is suggested by A. H. Wilkes in the British Bee Journal. Information is lacking as to cost and durability—two important factors. He says:

> "May I suggest thin, or laminated (technical term) rolled sheet-lead of the strength necessary to weigh one pound for one square yard? It can be quickly and easily fixed on any shaped hive-roof, and is absolutely weather-proof so long as the surface is not pierced. Sheet-lead in this form can be had of any plumber. It only needs to cut the lead of such size as to allow plenty of length to overlap on all sides, and if secured with a copper tack here and there, it will carry off rain effectively."

Why Do Bees Build Drone-Comb?

Some discussion on this point is occurring in Gleanings in Bee-Culture. M. A. Gill thinks the bees do not *prefer* to store honey in drone-comb, but when they build drone-comb it is because they desire to rear drones. He cites as proof the bees building drone-comb in odd corners busily until a swarm is shaken, when they will build only worker-comb. M. W. Shepherd says that when a heavy honey-flow is on, "if there is any comb to be built, it will be store or drone comb, no matter whether you use light, medium, or heavy brood foundation;"

and Geo. W. Phillips makes the remarkable statement that according to his experience (and he has had a large experience producing extracted honey in Jamaica), "bees will build drone-comb after a swarm is shaken, about the same as before."

Miscellaneous Items

Capt. J. E. Hetherington, of Otsego Co., N. Y., passed away Dec. 31, after an illness of about three weeks. Had he lived until Jan. 7, he would have been 64 years of age. The notice came from his son, Hubert B. Hetherington, dated Jan. 8. Capt. Hetherington was one of the most extensive and successful bee-keepers in the whole world, counting his colonies by the thousand. As soon as we can arrange it, we will be pleased to give in these columns a picture and biographical sketch of Capt. Hetherington, whose departure will be deeply felt by not only all who knew him intimately, but by thousands of bee-keepers who were aware of his value as a leader in bee-keeping.

LATER.—Jan. 12 we also received the following from Mr. P. H. Elwood, referring to the death of Capt. Hetherington:

FRIEND YORK:—The closing hours of 1903 bereft us of our beloved Capt. Hetherington. To his family and intimate friends the loss is immeasurable. Among bee-keepers the one has fallen who for more than a generation has stood at the head of progressive, practical bee-keeping in this country.
Yours truly,
P. H. ELWOOD.

Picturesque Cincinnati is a most beautifully illustrated 80-page pamphlet, 8¾x10¾ inches, printed on the finest paper. It "shows" that city in elegant style. It is indeed a work of art. It was sent to us with the compliments of the publisher (Albert O. Kraemer), J. C. Frohliger, and the Fred W. Muth Co. Price, 50 cents, if you wish a copy. Mr. Frohliger asks in a letter, "How will this do for a convention city?" We should say it is just the place for the National Bee-Keepers' Association to meet some time.

Mr. Wm. F. Ware, of Cumberland Co., N. J., gives his opinion of this journal in these words:

"The American Bee Journal has been a big help to me in working with my bees. I can not get along without it. How any one who keeps only a few bees can, is more than I can tell. So, please send along the good "Old Reliable" for one more year, and if we do not get a good crop of honey next season, it will not be its fault."

A New Bee-Keepers' Organization.—The bee-keepers of Jefferson Co., N. Y., recently organized with the following officers: President, M. C. Harrington; 1st Vice-President, A. A. French; 2d Vice-President, Pearl Symonds; Secretary, Geo. B. Howe, of Black River; and Treasurer, D. R. Hardy. All bee-keepers in that region are invited to join. Dues are $1.00 a year.

Mr. Etienne Giraud, of France, writes us as follows:

"The year 1903 was not a good one for queen-rearing. Rainy weather is not propitious for the mating of queens. The bees preferred by us are produced from a Cyprian queen mated to an Italian drone."

The Apiary of Theodore Steger is shown on the first page. Mr. Steger wrote us as follows:

MR. EDITOR:—I send you pictures of my house and apiary. The hives all face to the southeast. Fifty-five colonies can be seen, the other 7 being in the garden, and one is under a cherry-tree. The big building on the right is the barn. The two boys on the right are Peter and Paul, aged 13 and 15 years; I am standing next, then our oldest child, Dora, 17 years old, and little Mary, aged 9; then her dear ma, Mrs. Jennie Steger. The picture was taken about the middle of August, and we were standing about with the bees flying around our heads.

I got 8400 pounds of extracted honey from 60 colonies. We could not take any honey from the last swarms, but they stored enough for winter. The supers are all removed, and as soon as cold weather comes we can put them into the cellar.

Dora and I enjoy reading the American Bee Journal, and I think she will be a pretty good bee-keeper, too. The boys and little Mary are also very handy.

I would write oftener about our bees and bee-keeping neighbors, but I am a German, and it is hard for me to write letters.
Washington Co., Wis., Nov. 7. THEODORE STEGER.

The Apiary of Hans Christensen appears on the first page. When sending the picture, Mr. Christensen wrote as follows:

I send you, under separate cover, pictures of myself, bee-yard, and my house where I keep bachelor's hall. I am leaning against a hive in the apiary, and the other person is Mr. Hansen.

The hives in the picture look rather irregular, mainly because some of them are raised in front, and an inch block put under the corners, to enlarge the entrance.

My honey harvest this year consisted of 160 pounds of extracted, and 35 or 40 pounds of comb honey. A year ago I had 2300 pounds, all extracted, but this year the bees gathered nothing since wine-maple stopped blooming. HANS CHRISTENSEN.
Skagit Co., Wash., Oct. 6.

Hon. Eugene Secor is still the "poet-laureate" of bee-keeping. His latest production is the following, which will doubtless be read with deepening interest by all:

When the Bees are Coming Home.

'Tis evening; Day has folded its tired wings
To rest, fann'd by the scented Southern breeze;
And homeward fly the prudent honey-bees
To join their happy sisters 'neath the trees,
Content if some small gain their labor brings.

The fragrant grass is cushion'd seat for me,
And in my lap the head of soft brown hair
That once my heart entangled lying there—
More youthful then, but not more dearly fair—
And sweet her lips as nectar sipt by bee.

"What fools we mortals be!" We fume and fret
Because of life's unceasing round of toil,
Permitting gold our happiness to spoil,
When love and service are the holy oil
That sweetens all the things we need to get.

The soft, low hum that falls upon our ears,
As darkness creeps upon the glowing West,
Is Labor's song proclaiming that the best
Of all that's good is found thro' daily quest—
And duty leaves no time for useless tears.
EUGENE SECOR.

Accompanying the foregoing was this paragraph about the weather and the bees:

We are having most delightful winter weather. Several days of late the bees might have flown a little if they had been out-of-doors, but mine are in the cellar, as usual. I am practicing, of late winters, a little of the Barber idea. The temperature of my cellar stands, from fall until spring, at from 48 to 60 degrees. During the early part of the season the bees are perfectly quiet at even the last-named temperature, but towards spring they get a little uneasy, and I have to keep the room very dark. The trouble with my cellar is, that I can't control it entirely, as hot-water pipes run through it.
EUGENE SECOR.

Mr. Secor has been doing considerable writing on bees and bee-keeping outside of the bee-papers the past year. He is now the bee-editor of the Northwestern Agriculturist, which claims to have a weekly audience of at least 150,000 people; and the Twentieth Century Farmer, also, has contained quite a good deal apiarian matter from Mr. Secor's bright pen-point. In addition to the foregoing, he has written a number of papers for State associations to which he belongs. Besides the multitude of interesting things in Mr. Secor's apiarian contributions, they possess the additional very important characteristic of authenticity. No errors or drivelling nonsense about them. His readers can feel a confidence in reading his writings on bees that they can not indulge when reading the most of the bee-matter found outside the strictly bee-papers.

The Apiary of H. M. Carr, a picture of which is on the first page, is thus described by its owner:

In regard to photograph sent, as will be seen, the hives are placed in pairs—two pairs (4 hives) with entrances in opposite directions form a group. There is a passage-way of about 2 feet between the rear ends of the hives. The enclosure is 30 yards square, and contains 56 hives, honey-house and space for wax-extractor. There are some advantages in having the hives arranged in this way, but the bees get confused, as all the hives and groups look just alike. I lost a large percentage of virgin queens at this yard last spring, that could be accounted for in no other way than that they went into the wrong hive on returning from their first flight. The worker-bees do not mistake any hive in their own group, but a hive in another group that has the same position as their own, seems to trouble them. I intend placing some odd objects about in the apiary another season that they may the better mark the location.

I use the regular 8-frame hive, and like the Hoffman frame the best. I have been keeping bees for eight years. The first year I procured some thick-top, loose-hanging frames, and have used them right along with the Hoffman, but I do not like them. I now use staples to space the thick-top frames that I have.

I sell all my honey in the home market, and have no trouble in building up a good demand for it.

I like the American Bee Journal. I have been taking it four years, and am with it to stay as long as I live, I think.

Bosque Co., Tex. H. M. Carr.

Convention Proceedings

THE COLORADO CONVENTION.

Report of the Proceedings of the Colorado State Bee-Keepers' Convention, Held in Denver, Nov. 23, 24, and 25, 1903.

BY H. C. MOREHOUSE, SEC.

(Continued from page 25.)

BEST USE OF UNFINISHED SECTIONS.

Question.—Which is the more profitable, to sell unfinished sections or extract the honey and use them for bait-combs the following season?

Mr. Aikin—I have pretty nearly decided to do away with bait-combs, but conditions determine when they can be used profitably. If one uses shallow frames bait-combs are not much good. If you add to the depth and use of a 10-frame width you need bait-combs. Then it is profitable to extract your unfinished sections and use them as bait-combs. But if you do not need bait-combs, it is better to sell them.

Mr. Morehouse—I have had some experience that may throw light upon this question. This season I sold all my unfinished sections that weighed one-half pound or more at the groceries in Boulder, receiving for them 7 cents per pound by weight. I thought at the time that it paid better than extracting them, but considering the higher price of sections and foundation, together with their value as bait-combs, I am now satisfied that I lost money. In the future, unless conditions materially change, I will extract my unfinished sections.

H. Rauchfuss—The biggest crop I ever had was one year when I used no bait-combs at all. In another season the bait-combs were the only ones filled in the supers. So it depends upon the conditions.

Mr. Aikin—In Colorado, foundation alone fails to meet the requirements once in 14 to 20 years. That is when the flow jumps from nothing to a full flow in one to three days, so that the bait-combs are filled almost before the bees can get to work on foundation. But these conditions do not occur often enough in Colorado to make it pay to provide bait-combs on that account. When people offer me only about half a cent more per pound for unfinished sections than for extracted honey, the difference due to the value of the wax makes it more profitable to melt up the sections.

Mr. Gill—There is a great deal more wax in unfinished sections than you think. This fall, in cleaning up sections, I had a lot of broken combs, amounting to 80 pounds in weight, which, when melted up, gave me 16 pounds of wax.

Mr. Aikin—That would make about five pounds of wax to the superful of sections. How's that?

Mr. Gill—There were a great many sections, hundreds and hundreds of them, and many were so light as to contain only about a tablespoonful of honey. They had been built on full sheets of foundation. But I am quite a friend of bait-combs, as will be seen when I tell you that I had 180 cases of honey that had been bait-combs.

Mr. Spencer—A bait-section is about as clean when taken off as when it was put on, if it was cleaned before it was put on.

H. Rauchfuss—That all depends upon the locality. If the bees have access to much narrow-leafed cottonwood, they will paint it red all over, and if you case that section it is not No. 1, while in other localities the bait-combs stay clean. Again, when the flow is heavy, the bees use only wax when they would otherwise use propolis.

GETTING RID OF MICE IN HIVES IN WINTER.

Ques.—How can we get rid of mice in the hives in the winter-time?

H. Rauchfuss—Don't let them in.

Mr. Porter—It is not so easy in practice to have hives that are mouse-proof, and only one of my honey-houses is. Last winter I wet some wheat in honey-sweetened water in which strychnine was dissolved, dried it, and set it around in dishes. There was no damage done in the two honey-houses thus treated, and I found a number of dead mice lying around. The hives outside, in those yards, were not entered by mice, because all had access to the honey-houses. I should think I used two or three grains of strychnine to a quart of wheat.

PREVENTING SWARMING BY TIERING-UP.

Ques.—Has any one been successful in preventing swarming by tiering-up hives, thus giving more room to the bees?

Mr. Morehouse—This season I managed part of a yard for extracted honey, and tiered-up full-depth bodies as fast as the bees needed more room for storing. None of the colonies thus treated swarmed in a yard that went crazy with swarming.

Mr. Porter—I have been successful with this plan in running for extracted honey. But if any have been successful with it in producing comb honey I should like to hear from them.

POSITION OF EMPTY SUPER ON HIVES.

Ques.—Can more honey be obtained in a good honey-flow by placing the empty super under the one partly filled, or on top of it?

Mr. Aikin—You will get more honey by placing the fresh super under the full one, but I will not guarantee that you will get any more money. The finish will not be so good. If the one already is about three-fourths full put the fresh one on top, because the bees will finish the one already started more rapidly by so doing; but when it is nearly finished change places. If the next time you look a third super should be necessary—because both of them are almost finished, but neither one entirely—then put them both above the added super; but if one is almost finished, and the other not so much, put the new super between them, with the one almost finished on top. Keep the one that is being finished next to the brood-chamber. It makes better finish and better weight.

Mr. Porter—I agree exactly, especially in changing the places of the supers when one is almost finished. It is then ready for taking off in a few days.

Mr. Gill—I am trying to get the most out of the business. I don't contend I can get a better finish, but I can sell more cases by putting my added supers under the old ones at any time in a good honey-flow.

Mr. Porter—If you have a good flow how do you know that it is going to last?

Mr. Gill—It is in the air. It seems as if one could know by feeling it. If the bees come up to condition in a rush, and the alfalfa and sweet clover begin to yield at the proper time, the honey is pretty sure to come. Have you ever noticed a "honey-day?" This last season there was nothing sticky in the atmosphere.

Mr. Aikin—How many got a yield this season from sweet clover? [Six.] This year the sweet clover did almost nothing for me, and out of 100 acres of cleome I got only the first taste of cleome honey. But the alfalfa yielded the whole season through, the first, second, and third crops. There was a fine bloom of sweet clover.

Pres. Harris—A man in Mesa County has three or four acres of yellow sweet clover. The bees go wild over it. He says it does twice as much as the white to build up his bees.

Mr. Gill—I never saw the time when sweet clover did not yield something.

J. B. Adams—I never did.

Mr. Gill—Yellow sweet clover would be a boon to bee-keepers. It commences to yield May 28th to the first of June. Last year it yielded splendidly. I shook the apiary within reach of it. The best swarms pretty nearly filled their hives with comb in a week.

SEPARATORS OR NO SEPARATORS.

Ques.—Can more honey be obtained in a good honey-flow by using separators in the supers or without them?

Mr. Aikin—Rather more without, but no more profit.

(Continued next week.)

Contributed Articles

Producing Comb or Extracted Honey—Which?

BY C. DAVENPORT.

WHICH will be the more profitable for me to produce, comb or extracted honey? is a question that those starting in our pursuit sometimes ask, and as I have produced both comb and extracted honey in quite a large way for a number of years, my opinion on this question may be of interest to such. But it is a big subject—much too large to discuss in detail in one article, so it will be necessary for me to be brief, barely touching, or not even mentioning, some things that may have a good deal of influence on the matter.

It has often been said that it requires less work, skill and experience to produce first-class extracted honey than it does to produce first-class comb honey, but, in my opinion, it requires just about as much skill and experience to secure first-class extracted honey as it does the same grade of comb honey; and, as far as the work is concerned, I would rather do the work necessary to produce, say $1000 worth of comb honey, than I would to produce the same value of extracted. It is true that there would be more work about the comb honey, but by far the largest part of the work with comb honey can be done during the comparatively leisure time of winter, early spring, and in the fall after the rush of our sweet harvest is over.

In my locality the main, or hardest part of the work about extracted honey, has to be done right in the rush of harvest. Of course, enough combs and upper stories could be provided so that the extracting could be left until after the flow, but there are a good many difficulties about this besides the large expense and storage-room required. It is considerable work and expense to take care of and keep such a large number of combs free from moth-worms during the large part of the time they are not in use. But this plan is prohibitive here, owing to the fact that most seasons our clover and basswood honey gets so thick after it is sealed that it is impossible to extract it—that is, the larger part of it does.

And, now I am going to mention something that to many may seem at least strange, if not hard to believe, which is, that, in many seasons here, weak colonies will not produce first-class extracted honey. This has been noticeable the last two seasons, which have been exceptionally cool and wet during part of the flow. I have, in my store-room at this writing, between 5000 and 6000 pounds of extracted clover honey from last season's crop. Some of this is so much inferior to the rest in flavor that I am selling it for 1½ cents less a pound. It was all extracted at or about the same time, and the only cause of or reason for its being inferior is that it was taken from weak colonies. It was kept separate, for the difference, when extracting, was very noticeable. The honey in the combs, taken from strong colonies, would be so thick that it was hard to throw it out. It was also hard to uncap it, for the honey was so thick and waxy that the knife would gum up badly before one side of a comb was uncapped. But the honey in these combs from weak colonies was altogether different, though they were left on the hives until well sealed. A knife would work on these combs all day without gumming up, and it took but a few turns in the extractor to throw the honey out, and while this honey was very thin, compared to the other, it was not sour, but it had a different and inferior flavor.

Now, another fact that may seem strange, is that this thin honey is now candied so solid and hard that it is almost impossible to dig it out of an open can, while the other is just beginning to granulate.

Although I am straying from my subject, there is another thing I would like to mention. Last season I did not order enough 60-pound cans, so I used a large number of round dairy or milk cans; these hold about 50 pounds, and I prefer them to the square cans for my retail trade, but as they have open tops and loose covers they do not answer to ship honey in.

I sent samples of this second-grade honey to many of my customers at a distance, and received a good many more orders than I expected, probably on account of its cheapness. In order to get it into shipping-cans I had to heat it, and as I thought it did not have much fine flavor to lose or injure, I just set these cans in a large tank of boiling-hot water, and kept the water at or near the boiling point until the honey was melted; and this treatment, instead of injuring its flavor, improved it greatly, according to my own taste, as well as a number of others to whom I gave samples of the two kinds. Afterwards I treated four cans of the best grade in the same way, in order the more easily to get it into shipping-cans, and nearly, or quite, ruined it for table use; and I find that it is almost impossible for me to liquefy this best grade slowly and carefully enough but what its flavor is injured.

Now, just what should make this difference in honey gathered from the same fields at one time, by the same race of bees, I do not fully understand. I have often noticed the difference in honey gathered by weak and by strong colonies other seasons, but I never had it occur in such a large way as it did the last two seasons. But this I can easily account for, because I never had so many weak colonies before, and never before in my time was there such cool, wet seasons as the past two were.

The way I account for the matter is this: In a wet, cool season these weak colonies are not able to generate heat and thoroughly ripen honey as it should be.

And now, while on this subject, I should like to say that, in my opinion, no extracted honey ever was, or ever can be, produced in commercial quantities that is equal in *flavor* to *first-class* comb honey. I believe that where bees are provided with ready-drawn comb to store in, they fill and seal these combs before the honey is as well ripened and flavored as would be the case if they had to build their own comb and store more slowly. But there is a great deal I don't know, but what I would be safe in saying is, that the largest part of the comb honey that is marketed is far from being first-class.

Another thing that might be considered against the production of extracted honey, is that here a large percent of these colonies, especially if there is much black or German blood in the yard, will have to be fed heavily for winter. I have a large and growing trade worked up in extracted honey among a class of people who are not able to use much comb honey, and, anyway, at the relative market prices I can make more money from a large yard, by producing both comb and extracted than I could from either one alone; so, unless there is some radical change I shall continue to produce both kinds—about "'alf and 'alf," as the Englishman said. Southern Minnesota.

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Packing Bees for Winter—Other Matters.

BY EDWIN BEVINS.

I HAVE nearly completed the work of packing for winter my 168 colonies of bees. It is quite a task to pack so many in the way I do, but I do not believe there is any way more successful for this latitude. It is simply to put an empty super on the hive, then fill with a chaff cushion, and then set up an outer case which allows a space of about 4 inches between the sides and the back ends of the hives, which space is filled with wheat or cut straw packed firmly.

Some bee-keeper said in the American Bee Journal not long ago, that he left the section-holders in his supers when packing for winter. Let me say, that I think his bees would be better off with no bee-space between the frames and packing.

DOUBLING UP COLONIES.

I did not start to write this article with the idea of giving anybody advice, but I will say a few words in answer to the inquiry of F. P. Briggs, on page 765. In doing so, however, let me say that I make no claim to the title of veteran. I have doubled up colonies of bees every year, and at all times of the year excepting in winter, and have one invariable way of doing it. When, for any reason, I wish to unite two colonies, I choose a time when the bees are all at home—either a cool day, or very early in the morning, or when the bees have become quiet towards evening. Smoke the bees of both colonies a little at the entrance, remove the cover of one hive, smoke the bees of it a little at the top, put two thicknesses of newspaper over the frames, punch a little hole in the paper, then take the other hive from its bottom-board and place it on the hive from which the cover was removed. The bees slowly eat the paper away and unite without any fuss. I never could be induced to practice a method that takes more time, and this has always been successful with me.

PERFORATED SEPARATORS—SUPER-ROOM.

Now, I want to say to Mr. A. F. Foote, page 767, that I have used sawed separators with holes in them, cut with a sharp point of a jack-knife, quite extensively for two or three seasons. If the holes are too large the bees will sometimes bulge the face of the sections opposite the holes; if the holes are too small the bees will endeavor to fill them with propolis. Occasionally I have found sections attached to the separators, but not many. My opinion is, that the holes are not much of an advantage anyway, and no great disadvantage.

In answer to his question whether it pays to use separators I would say, Use them, every time. Owing to a shortage of the supply this season I was compelled to have a good deal of the honey stored in sections without separators, and want no more of it. No, sir, you did not give your bees plenty of super-room. My bees, this season, built lots of comb where it should not have been, and all because of lack of super-room. I could not get sections when needed, although I kept telegrams and letters flying in every direction, and the consequence was that supering to a degree that would answer the requirement of the bees was simply impossible. My losses on this account were several hundred dollars. I had to traverse the yard day after day, from early morning until sunset, finding where the pressure was greatest, and contriving means for temporary relief, then go to bed and lay awake a good share of the night trying to think of some new expedient, and solacing myself with the hope that the mail would bring me, next day, a letter from some supply-dealer that he had sent me something. But I had to see many days come and go by with many hives and supers filled to the brim right in the midst of the heaviest honey-flow known for years, and not a thing to give the bees to store in.

SPRING FEEDING OF BEES.

I wrote, last spring, that I was feeding 100 colonies of bees. At the opening of the honey-flow, late in May, the number had been reduced to 90 colonies. The losses were due mainly to loss of queens, and consequent doubling up. One colony I lost by starvation in spite of my watchfulness, and one colony I lost by fire.

Right here, I will pause to say to Mr. Hasty that the let-alones are welcome to smile the year around at the way I fed my bees last spring. In consequence of this feeding I had rousing colonies of bees ready to do big work in an unlimited field carpeted with white clover bloom.

SWARMING AN EVERY-DAY OCCURRENCE.

Swarming commenced about June 1, and was an every-day occurrence from that time until the middle of July. From 1 to 15 swarms had to be cared for every day, and there were 250 in all. The expedients for caring for all of these swarms were as many as those for keeping the hives supered with insufficient supplies, but my losses were insignificant when swarms would issue, and sometimes 2 or 3 would issue at a time, and at a time when there was not a thing in sight to hive them in. Persons around me would be flying around in an exciting way asking, what I was going to do now. I would just say to one, you do this, and to another you do that, and we'll take them in, and we did. The 250 swarms were hived in a little less than 90 hives. The rush and roar of these great masses of bees in the middle of a hot afternoon was terrific. A timid person had no business in the yard.

Of course, many of the colonies thus made proved to be queenless, and these queenless colonies have been united with other colonies. Many times I would find a ball of bees soon after hiving 2 or 3 swarms together, and then I would release a queen, cage her under a glass tumbler, give her a bit of honey, put a hairpin under the edge of the tumbler, and keep her until I saw a colony where the bees seemed to want a queen.

One morning, rather early, I thought the cry came that a swarm was clustering on a small branch of a small plum-tree down at the lower end of the yard. I went down with a hive, and found the bees so low down that I set the hive on the ground and shook the bees from the limb. Some went into the hive, and some returned to the limb, but before half of the bees could be gotten into the hive, another swarm clustered on the same limb, or mingled with the bees that were entering. This thing was kept up until 10 swarms had come to the same spot. I would fill a hive with bees, take it away, and then fill another. I think I run the 10 swarms into 7 hives.

The freaks of swarming where there was so much of it are too numerous to mention. August 25, a large swarm was seen clustered in a peach-tree. There was just one hive on the premises not in use, but not a single frame or a bit of foundation, so I borrowed 3 frames of sealed honey from other hives and hived the bees on these, letting those that could not cluster on them cling to the sides of the hive and the under side of the cover until frames and foundation should arrive, which I felt sure would be next day.

The next day another large swarm issued, and was said to be clustering where the swarm had clustered the day before. I went to see what could be done, and found the bees going in with the swarm of the day before. What bees could not get in the hive clustered between one side of the hive and a board I had leaned against it for shade. When my supplies came, instead of filling up the hive with frames of foundation, I borrowed more frames of honey from other hives, filled the hive with the swarms with these, put on two supers of sections, and set this great force to storing comb honey. Then the bees that had loaned me the filled frames were set to work drawing out foundation.

I have another colony which issued as a swarm early in September. I am preserving it because I believe it to be one with a young queen, and young queens do good work the following season.

I will remark before I forget it, that bee-escapes were not needed in the height of the season. Supers could be set on end anywhere in the yard, and the bees would gradually leave them, and other bees would pay them no attention.

BEST SIZE OF HIVE.

In the infancy of my bee-keeping days I rashly promised that I would some time give the readers of the American Bee Journal my opinion of the 8-frame dovetail hive. I am reluctant to fulfill the promise because of the fact that comparisons are sometimes odious. This I will venture to say, that I am still making hives, but am not making any, or many, of that size. If I were a comb-honey producer exclusively, like Dr. Miller, and were a younger and stronger man, I might revise my opinion of it. It takes too much watchfulness and too much work for me. I used a good many of them this season, and practiced contraction with some colonies, and got some splendid work done in these; but the wintering is where the shoe pinches. I am now making the 10-frame dovetail and the Dadant-Blatt hives for my own use.

RESULTS OF THE SEASON OF 1903.

Of the financial results of the season's operations it may be well to observe some reticence. The out-goes have been larger, and the incomes smaller, than they would have been if my foresight had been as good as my hindsight. Probably 7 tons of honey, $\frac{2}{3}$ comb, is my share of the plunder.

GETTING UNFINISHED SECTIONS CLEANED OUT.

To Mr. Whitney, who criticised my way of getting unfinished sections cleaned out in the fall, I will respectfully say, that it seems to me that he is not in position to be a fair critic, as he says that he had never tried it in the fall. I have had the work done this fall in the manner before given, and with perfect success. This season I used the uncapping-knife on all sections that had sealed honey, and I was surprised at the rapidity with which the honey went below. I have proved this season that the firmer chisel is an awfully good thing in the bee-yard, but I do not use it for an uncapping-knife.

I wish Mr. Whitney lived near me, for I have scripture warrant for the belief that we would soon speak face to face.

Decatur Co., Iowa, Nov. 30.

Successful Wintering of Bees on the Summer Stands.

BY ROBT. A. HOLEKAMP.

As under "Editorial Comments," contributions from readers are requested, I will describe my way of wintering bees on the summer stands, which has proven a success with me, and may be of interest to some who are beginning in bee-culture.

In the fall, when the supers are off the hives, I examine every colony by lifting the hive, and if I am not certain that an 8-frame dovetailed hive weighs at least 50 pounds, or a 10-frame dovetailed hive 60 pounds, I put it on the scales, and if the weight is not up to my requirement I mark the weight on a slip of paper, which is put under the brick on top of the hive. I also mark it down on a sheet of paper opposite the number of the hive. When I did the last extracting I set aside a sufficient number of full combs for feeding, and I now go over the hives and give those that are short in weight, in these combs, sufficient honey to bring them safely through the winter. After this is done I lay a Hill's device of my own construction—I call it a bridge —over the center of the frames. These bridges are made out of 6 pieces of plastering lath, each about 10 inches long, by laying two pieces flat down parallel to each other about 6 inches apart, and nailing the other four pieces across, with their ends flat on the first ones about ¾ of an inch apart. I then put an empty section-super on the hive, cover over the bridge a piece of cotton sheeting, or any other cheap material. This piece of sheeting is of a size to cover the bridge fully and the frames in the hive. On this sheet I lay a cushion made out of an oats sack filled with leaves or corn-husks. I now place the winter cover over the hive, and the bees are safe for winter.

I have some winter-cases which I bought from supply-dealers, which I put together carefully, puttied them up and painted them, but the covers soon cracked and leaked. I then covered them with tar-paper, and since then I have no more winter-cases. I now make winter-cases usually out of empty shoe-boxes, which are made of thin, light, matched lumber, and which I can buy at a low price from shoe-stores. I make them of a size to fit easily over the hives, and to cover them down to about an inch from the bottom-board. I cover the top case with tar-paper. If these cases are handled carefully, and are stored away during the summer, the paper will last for years.

My reason for placing a piece of sheeting over the frames before I put the cushion on is this: The sheeting prevents the bees from gluing the cushion to the bridge and frames. If I wish, for some reason, to lift out the cushion I can do this without disturbing the bees.

When there is a nice, sunny day in winter I go through the apiary, lift the winter-cases off the hives, and let the sun shine on the cushion. It will dry out any dampness which may have accumulated in the hive, and if I desire to turn the cushion I can do it.

Last year I lost a few colonies by mice eating the honey out of the hives. I had been away from home, and during this time the mice did the mischief without being noticed. To prevent a recurrence of this, I am going to put entrance-guards on all the hives this fall.

I have noticed complaints in the bee-papers about leaky hive-covers. For winter covers I have found the tar-paper to be very satisfactory, it being also inexpensive.

My colonies are all very strong this fall, as I succeeded in preventing swarming this year, but I have had in other years some very weak colonies, and have wintered them successfully in the above-described manner.

St. Louis Co., Mo., Nov. 16.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

The Smoking Habit Among Bee-Keepers.

In the Progressive Bee-Keeper is found the following aragraph written by Somnambulist:

"G. C. Greiner says: 'I am not a very heavy smoker, but when I expect a very hot time I always light it, and lay it in a great measure to my pipe (and gentle treatment) that I can handle my bees almost entirely without a veil, and mittens I never use.' Small comfort this to most lady bee-keepers."

Now, Somnambulist, I must enter a mild protest. When you say, "Small comfort to *most* lady bee-keepers," that's a pretty strong insinuation that at least *some* of them use the nasty weed. Is there a single lady bee-keeper in the circle of your acquaintance that does? Did you ever hear of one? I didn't.

Furthermore, your saying it is small comfort to most of the lady bee-keepers sounds too much like saying it will be large comfort to most of the *gentlemen* bee-keepers. Please call up in your imagination a procession of gentlemen bee-keepers and see how many of them are given to the tobacco habit! Don't you know that at conventions of bee-keepers it has been a very noticeable thing, during the recesses, that scarcely a man of them was ever seen smoking? I'm pretty sure you don't smoke yourself, for if you did you might set the house on fire some night when sleep-walking! Besides, I don't believe a man with a pipe in his mouth would always write in so clean and interesting a manner as you do.

A Hard-Working Sister in Oregon.

I have no bee-keeping sisters in this neighborhood, and it is only through the "Sisters' corner" that I find what other women are doing with bees. I could tell Sarah J. Griffith (page 680) that I, too, make hives—in fact, my hands are more used to the kind of work she describes than they are to the use of the pen, as you no doubt can see. Although I have only about 30 colonies of bees, I do all the work about them myself. As I am in a little out-of-the-way place in the mountains, it is not always easy to obtain bee-supplies. I usually get good crops of honey, which is never sold for less than 12½ cents per pound; frequently it brings 15 cents. The past season was the poorest for honey that I have known since I kept bees, which has been about 15 years.

Mrs. R. M. Horner.

Marion Co., Oreg., Dec. 6.

"Peddling Out" Wives Among Arizona Bee-Keepers.

On page 12, Mr. Hadsell seems to object to what is said on page 746 about wives being "peddled out" to Arizona bee-keepers, and Mr. York lays upon me the responsibility of the suggestion. It doesn't belong here, Mr. York. I merely christened the suggestion—and I pass along the responsibility to where it properly belongs—to the man who wrote that clipping on page 746, where he says: "J. Few Brown is asked to send a car-load of Virginia wives to the bachelor bee-farmers of Arizona." If that doesn't suggest "peddling out," I don't know what would.

It was to that clipping that I referred, and not to what Mr. Hadsell says on page 12, which is quite another matter, and of which I knew nothing. What he says is all right, unless it be in the last paragraph, which is open to more than one interpretation. If Mr. Hadsell's wife was an old acquaintance, and followed from Pennsylvania the man who was too busy to come back after her, she did entirely right. All honor to the girl who has grit enough to follow to the ends of the earth the man whom she loves! But if she went all the way to Arizona to marry a man whom she did not previously know—well, I've already said all I need to on that score.

I must also enter a protest against the Editor's footnote, if he means that an Eastern girl "might do well" to go to Arizona to marry an unknown man. But I don't believe he means that; that "*final* trip" rather *infers* that the man had thought enough of her to make one or two *previous* trips *her* way.

[We—we—we—that is, we—some of us—we—we—got hit pretty hard by Miss Wilson, didn't we, Mr. Hadsell? We "might do well" now to turn this whole subject over to "Our Homes" department of Gleanings in Bee-Culture, and let A. I. Root "figure it out," and may be he can get the right answer to it. As Mr. Hadsell and the writer are not at all interested in getting married (and Miss Wilson, herself, has persistently stood out against it for—well, some decades!), perhaps we'd better let the Eastern bachelor girls do the hunting themselves for the Western bachelor bee-keepers, if they want them for husbands. Or, if the latter want any of the former, why in Grand Canyon don't they take a trip to the East in the winter-time and help themselves—to what is "left" down there?—Editor.]

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

HATCHING OF EGGS OF BEES.

Barely possible (if Dzierzon says so) that in exceptional circumstances an egg might be hatchable two weeks after being laid. Wish I knew more about the *usual* time of becoming worthless. I'll guess it at four days—or one day of utter neglect—and let somebody who knows better poke me up about being so green. Also, I entertain a suspicion that, sometimes, from drying, eggs become non-hatchable in much less than a day—perhaps not dead absolutely, but might as well be. You see, if it was usual for bees to keep eggs two weeks, we should have after-swarms issuing 14 plus 16- 30 days from prime. Page 763.

GROWING OF CATNIP.

Thanks to J. W. Johnson for his catnip experiment. Nine and a half acres seemingly well put in in spring just died out under a not-over-severe dry-spell. Presumably the case of a spring without any dry-spells might bring an exceptional success. To be feared that an extra-severe drouth in the fall might also mean failure. Well to note that it doesn't bear cutting well when little—the half acre among the weeds lived in spite of spring drouth, while the big field was dying—but died incontinently when cut with a mower. From the natural habits of the plant we may conclude that what it hankers after is partial shade—a thing we can't well give it on a large scale. Page 766.

GNAWING WOOD SEPARATORS.

"Some" on gnawing, I should call A. F. Foote's bees, to take down wood separators a half inch in one season. Give 'em some tin to break their teeth on. Page 766.

CHANGING THE COLOR OF HONEY.

Interesting to see that they succeeded in making a sample of dark extracted honey light with three hours of exposure to ozone. But the coloring matter in honey is not always the same thing chemically. There's the carbon (soot) in the honey of a big city; and it's not only possible, but probable, that different plants put in different substances as color. One experiment is not quite full assurance of the process working on other chemicals than it has been tried on. Sunlight has been found to work well on the soiled cappings of comb honey; wonder how it succeeds—or might succeed—with extracted. Page 771.

GIVE CHILDREN SWEETS—PLENTY OF HONEY.

I'm not much on Dowie, but he's right on children and sweets. Have the candy made under your own supervision, and so be sure there is no harmful thing in it, and then keep them from eating too much by having it on the table every day. I don't think we do well to do much scolding about candy and jam. Let's tell the truth about them, and say give the children the choice between candy and honey—reasonably plenty of both. As bee-keepers, let us meet the competition of pure candy in diamond-cut-diamond spirit. Undoubtedly children (and their elders, too) very often suffer from too large a quantity taken into the stomach—and then the blame is put on whatever tastes best. That's not a fair conclusion, though very natural. Neither is it fair to lay it down that a health-food must of course be something that does not taste very good. Not creditable to the Creator if the senses he has made always err in judgment of what is good and what is not. Page 772.

CARBON-BISULPHIDE AND MOTH-KILLING.

So if you get the under-floor space of your dwelling permeated with carbon-bisulphide, in your moth-killing efforts, you have to pay for it with a long spell of bad smell while it takes its own time to work out again. Easy to see; but, perhaps, not so easy to foresee. Page 783.

NICE, CAPPED HONEY SOURING IN THE HIVE.

When nice, new, capped honey sours in the hive (and I think it's not such an uncommon affair), it is usually because the colony has swarmed, and left it uncared for in hot, damp weather—moisture also steaming up from thousands of brood below. I incline to "bet a cooky" that J. T. Reno's bees, page 783, swarmed and went to the woods when he knew nothing about it. And sour honey, if you don't lose it you'll probably do worse than lose it. Same *might* be true even in case you try to make vinegar of it.

SUGAR-HONEY IN HAWAIIAN ISLANDS.

Here's a fine kettle of fish—and what are we going to do about it? In the Hawaiian Islands bees can make sugar-honey right from the cane-fields and sugar-mills—and mix it with floral nectar brought in at the same time. Page 783 notes the arrival of 121 cases of such honey. May be more a scare than anything else, but still a report to set one thinking. Not at all impossible that the report may be a mean and groundless suspicion of some extra-fine honey. Imports into a new field oft before have encountered just such. And if the stuff were deadly poison it wouldn't scare our folks half as readily.

Some Expert Opinion

"In the multitude of counsellors there is safety."—Bible.

The Best Size of Sections.

If for some reason you were to start in anew to keep bees, and were obliged to get an entirely new outfit—

Ques. 4.—What section would you choose? Why?

N. E. France (Wis.)—4x5 plain.

Wm. Rohrig (Ariz.)—I do not produce comb honey.

O. O. Poppleton (Fla.)—I do not produce comb honey.

Geo. W. Brodbeck (Calif.)—4x5x1⅜. They make the best display for the quantity.

Mrs. L. Harrison (Ill.)—The regular one-pound section, that fits into our surplus-cases.

J. M. Hambaugh (Calif.)—Whatever the markets call for. A more ready sale is my reason.

C. Davenport (Minn.)—I don't know, but one thing I do know is, that I am in favor of a standard of some size.

R. L. Taylor (Mich.)—4¼x4¼, 7 to the foot, 4-piece. Because they are the neatest, hold the right amount of honey, and suit me best.

Prof. A. J. Cook (Calif.)—I think I prefer the one-pound, one-piece section. The plain section with fence also has much to recommend it.

G. M. Doolittle (N. Y.)—One-pound nailed section. Because stronger, and of a more symmetrical appearance than the 4¼x4¼ section.

Eugene Secor (Iowa)—Perhaps the tall ones, but I am not quite sure that they are any better. The 4¼x4¼ makes the finest shape for table use.

P. H. Elwood (N. Y.)—4x5 for unglassed sections; 4x4½ for glassed sections; 1⅝ inches thick. Bees will store more honey in a large section.

Dr. C. C. Miller (Ill.)—4¼x4¼x1⅞, with insets. open top and bottom. They are most nearly standard of any, and suit my trade better than anything else I have tried.

C. P. Dadant (Ill.)—The 4¼x4¼. Because it fits well on the hive mentioned, and has proven satisfactory, while all other sizes are more or less fancy, and have not been thoroughly tested.

G. W. Demaree (Ky.)—I prefer the "open" bottom and top section. Why? Because they can be worked with or without separators, and are adapted to the "tiering system" without any additions.

Adrian Getaz (Tenn.)—Whatever the market would prefer. Here, at the present time, the 4¼x4¼ is the one adopted. The plain section with fence separator, for the reasons stated in the previous question.

Jas. A. Stone (Ill.)—The plain section, 1½ inches wide. Because I find the bees fill closer to the wood than they do in the wider section, and therefore about the same weight as the 1⅝ section, being in most cases right at a pound.

Rev. M. Mahin (Ind.)—That is a pretty hard question for me to answer. All of my experience is with a section 5x6x1½, and without separators, would have little difficulty in casing the honey. I think bees will occupy large sections more readily than small ones.

L. Stachelhausen (Tex.)—I would use 4x5 sections, if I could get the same price as for the standard, 4¼x¼ sections. It is somewhat easier for the bees to build combs in larger sections. We have more sections in one super, consequently save some handling.

C. H. Dibbern (Ill.)—I have used the whitewood 4-piece 4¼x4¼-x1¾ for the past ten years, and prefer them to all others, unless it is the same size plain section. The only objection I find to the latter is the additional cost of fence separators; then, too, I think the bees are much more inclined to brace the combs to the slats unless they are made of plain sheets with cleats, as in the fences.

E. E. Hasty (Ohio)—I would not be strenuous about this, but think the old-style pound section, perfectly square and ⅞ wide, would be my choice. "Feared" of the prevalent moral itch—wishing to sell for the highest possible price less honey than there seems to be.

Mrs. J. M. Null (Mo.)—4¼x4¼x1⅞. Largely for the sake of uniformity. A change, if in size of section, means several other changes. Remedies for the reduction of size of the pocket-book are not in demand among bee-keepers. No need of anti-fat in connection with them.

E. Whitcomb (Nebr.)—The Danzenbaker. Because it looks best when filled properly. In order to excel in producing honey it is good policy to cater not only to the eye of the customer, but as well to his appetite. An article that looks well is liable to sell better, and to taste better after it is sold.

Dr. J. P. H. Brown (Ga.)—I would use the 4¼x4¼x1⅞ one-piece section if I could get them. Because they suit the present market—the people are familiar with this size. Years ago, before dove-tailed sections were made, I used a nailed section 4¼x5¼, that was very satisfactory. Bees will go to work more readily in a large section than in a small one.

E. S. Lovesy (Utah)—I would use the regular 4¼x4¼x1⅞ sections, because they fit the section-holder, and can be transferred with little time or trouble from the super to the shipping-case, as they require little or no cleaning. The supers can be tiered up to any number desired, and while the bees have free access through them, they can not get to the outside of the sections to stain them, hence they look new and as clean as when they were put into the supers.

J. A. Green (Colo.)—If it were not for the inconvenience sure to arise from using an odd size, I would use a section 4¼x5x1¾. My only reason for changing from the 4¼x4¼x7 to the foot, which is the size I use now, would be to increase the weight of the section a little, which would suit our Colorado market better. I would not use a section thicker than 1¾ for the regular style, or 1⅜ for the plain section. 4x5 is not heavy enough, and is an inconvenient size in a hive of regular length.

R. C. Aikin (Colo.)—My choice is a 4x5, and 1½ thick (wide), scalloped ⅛, and clear out to the side-bars; fences to be full-depth of section, thus the scallop is necessary to allow easy bee-passage, and will also give better finish to tops and bottoms because the width of top and bottom is the thickness of finished comb, and it looks better both in and out of the case. A comb being built will naturally be built downward more rapidly than sidewise, so a 4x5 section will be filled out in the lower corners quicker and better than the wider, shallower section. It also enables me to use brood-frames of same depth, and still not get them too very shallow; thus, so far as the super-body is concerned it is identical with brood-chambers; I can use either one for the other. This year (1903) I had about 5000 pounds of comb in 4x5 sections, and it cleaned easier and was nicer, and averaged heavier than old-style sections, and as they were according to the above description, they had to be made to order.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Hives Painted Inside and Outside.

Will paint on the inside of hives be an injury to them?

In remodeling our church, of which I am pastor, I obtained quite a lot of clear pine lumber which had been in use for pews for 34 years, and had been painted repeatedly on both sides. I have thought of making it up into hives. Will so much paint be offensive to the bees?

Minnesota.

Answer.—No, bees will not object to paint inside the hive unless it be too fresh. The lumber you have will be all right.

A Peculiar Colored Comb Honey.

I am an old man, and have been in the bee-business for 50 years. I have now 5 apiaries, my home apiary containing 26 colonies. The out-apiaries are within a radius of 3 miles. I run for comb honey only.

The past season I had a new experience with my home apiary. I found 200 or more sections of a different grade of honey from any that I ever saw before. It is of a purple shade; it came in with the white clover. I first gave credit to milkweed, but had to give that idea up as it came after milkweed was gone. My home customers were afraid of it. It was of a fine flavor, something on the order of red clover.

Can you give me any light on it? There is a field of alfalfa within half a mile of me, and has been for 2 or 3 years. From what I have learned from reading, there is no honey in alfalfa this side of the Mississippi river. If that is so, where did that purple honey come from? Is alfalfa honey a bluish-colored honey? I have never had the privilege of seeing any. If it is not alfalfa, what can it be? I never had anything like it before. My out-apiary did not give a single section of that color.

New York.

Answer.—I can't even make a guess. Can any one help us?

For a long time it seemed to be true that alfalfa yielded no nectar east of the Mississippi, but lately reports have been made of its yielding in Wisconsin, and it is possible that it may yet become a good yielder in general east of the Mississippi. The honey from it, however, is not a purple shade; it is as white as white clover, if not whiter.

Miller Brood-Frames—Foundation—Splints.

1. Where can I get the Miller brood-frames? I have never seen them quoted in the catalogs?

2. What weight of foundation do you use in them, light or medium brood?

Do you use the splints on both side of the foundation?

Illinois.

Answers.—1. You can probably have them made by any manufacturer by asking for "Miller brood-frames," and possibly you could get them through any supply-dealer.

2. So far I have used medium. Possibly lighter would work all right.

3. Only on one side.

Basswood Lumber for Hives.

I am well pleased with the American Bee Journal, and think it is sound in "doctrine." But I was nearly knocked out by one of Dr. Miller's answers, on page 763 (1903), where he says basswood swells, shrinks, and warps so that it is not fit for any part of a hive. And this right on top of my experience with some 30 hives made of cottonwood and basswood, that I have been using for 6 or 7 years, and never found any fault with them. In fact, I think so well of them that I have just had a lot of the same lumber sawed to make more. I make my own hives, 10-frame size, and run for extracted honey; I buy frames in flat. If Dr. Miller will try a few hives and make them of boards a full inch thick, after being seasoned and dressed, nail them together properly, then give them 2 or 3 good coats of paint; I will stand good for the result. My objection to pine is, it is not thick enough, and costs about three times as much as the other. I advise my Missouri friend to use basswood in spite of Dr. Miller's answer.

Missouri.

Answer.—I am very glad if you can use basswood successfully, especially where it costs so much less than pine. It is quite possible that I am "away off" in thinking my little world is the whole of the world. I have tried basswood for brood-frames, and they twisted badly. Mr. Niver says it is different with him. Possibly the place in which basswood grows makes a difference, and possibly the age of the trees makes a difference. I certainly wouldn't want anything about a hive made of such basswood as I have tried. I wish we might know the whole truth about it.

Honey Turning to Wax—Foolish Notion.

Enclosed find a clipping from a newspaper. I would like to know the exact truth in it. My opinion is, that the honey Noah took into the ark would not yet be beeswax.

New York.

The clipping referred to reads as follows:

"Honey will turn to wax if left untouched for some years."

Answer.—I am entirely of your opinion.

Forming Nuclei.

1. I have nearly all the standard apiarian authors, and have read considerable. I have nearly 100 colonies of bees, some Italians, some Carniolans, but mostly black or native bees. What I want to learn is about forming nuclei in order to rear several Italian queens with which to Italianize my apiary. I will outline a policy, and then you can kindly give me your opinion and comments.

Take No. 1, June 1. It sends out a swarm; while it is clustered I prepare a hive and put them into it, and set them by the parent hive. In the meantime I have prepared a suitable bottom-board on which to set the parent hive, as follows: By putting a bottom strip ⅜ inch all the way around it, on which the hive is to set, then saw out little pieces of the strip for entrances for 3 different nuclei in the same hive, by adding one or more division-boards. Then I remove the hive from its bottom-board and put the new one in its place; then, before placing the hive on it I go through it and divide the frames with adhering bees, so as to give 3 frames to each nucleus, with a queen-cell to each. Then I put the 3 brood-frames in one department, and then add a division-board, then 3 more frames, bees and all. When the hive is set on the prepared bottom-board there will be an entrance already made by sawing out a piece of the bottom strip ⅜ inch deep, and each nucleus will have a separate entrance; if two nuclei only, there will be an entrance at each end, but at opposite ends. If 3 nuclei in one hive, I will have an entrance at one side, and one at each end, say 4 or 5 inches wide, and ⅜ deep, or whatever is the thickness of this bottom strip; the division-board to be tight, coming smooth to the ground floor and at the ends, and even with the top edge of the hive, so the bees can't possibly mix. Then cover over the top, first with a suitable piece of some kind of cloth. (I cover all my hives with something under the wooden cover.) Then as soon as these queen-cells hatch out, and they are fertilized and begin laying, I can dispose of them as I please—introduce her to a colony of natives by removing first their queen and then add another queen-cell to this same nucleus, and continue as long as desired the same process, keeping an eye to removing the brood when it accumulates too much in this nucleus.

All my hives *now* are Langstroth size, with Langstroth frames. I have a few, however, of my old pattern, the frames of which are 14x8½, that I thought of using for nuclei especially, instead of the standard size. But here develops one trouble in that case: Suppose colony No. 1, that we have been discussing thus far, is in a standard-size hive, and it sent out a swarm, and I propose to form a nucleus out of the parent colony after it has sent out a young swarm. In that case won't I have to convert the colony (although of standard size) into nucleus form, as above mentioned?

2. My apiary is located in an orchard, and faces northeast, and is north from my dwelling, say 100 yards. I desire to place 5 Italian and one Carniolan colony south of the residence, facing southeast, with the dwelling and some large trees between them and the apiary generally, so the natural flight of these will be southeast, and that of the general apiary northeast. Out of these 5 Italians and 1 Carniolan I wish to rear all the queens with which to Italianize the whole apiary. Do you think these 6 colonies will furnish drones sufficient? and will those drones not be most likely to meet those young queens on their wedding-flight before the drones of the apiary would, with this condition of things? While I know it is not a certain thing, by any means, would it not be *very likely*, and somewhat safe, to think the drones of these 6 colonies would meet the young queens first?

3. Could nuclei be successfully formed out of the young swarm that came out of hive No. 1, as soon as it can be hived, if so desired? Which of the two is the best to form nuclei out of, the parent or the young colony?

4. Could you successfully form nuclei out of a colony that has not swarmed, but is getting ready to do so, by removing the old queen and distributing the combs as above outlined, supposing, of course, they have built queen-cells?

5. Now comes the most important question to me of all. You understand by now the situation. The 5 Italian and one Carniolan are by themselves, separated by 100 yards from the apiary proper, and that I wish to rear all my queens from these with which to requeen and Italianize the entire apiary. Now, will you kindly outline a plan—the most practicable for a man not exactly a beginner, but one along in the junior or sophomore class in bee-culture, and one who craves to graduate an up-to-date apiarist, some time in the future? In this last question I won't make any suggestions, but listen to you, and won't confuse you by asking any more questions on other subjects in this letter.
MISSISSIPPI.

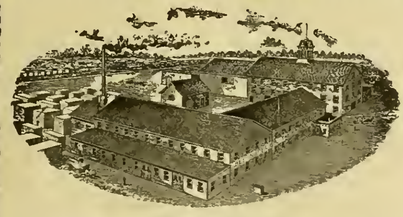
ANSWERS.—1. When you put your nucleus hive on the old stand, the probability is that the nucleus entrance that comes nearest the old entrance will receive so many bees that the nuclei in that apartment will be undesirably strong. You may do better to set your nucleus-hive on a new stand, and put the swarm on the old stand. With this modification the plan ought to work satisfactorily. I don't see, though, how you can carry out the plan by using frames of different size in your nuclei.

2. With a reasonable amount of drone-comb in the hives, the six colonies would furnish an abundance of drones; but I'm afraid you're counting too much on position. I don't know just what the chances would be, but I should expect numbers to count for more than position. But you could make the chances good by encouraging drones in the six colonies (better use one for queens and the others for drones) and surpressing drone-comb in all others, *providing* no other drones are within a mile or two.

3. You will not find a swarm a very good thing out of which to form nuclei; the old colony is much to be preferred.

4. Yes, by making such a colony queenless for two or three days it could be nicely divided into nuclei; only there would be a preponderance of bees at the point where the old entrance was. You might modify it in this way: When you find queen-cells about ready to seal, take the queen with a frame of brood and a frame of honey together with adhering bees and put in a hive on a separate stand. Two to five days later take away the old hive and form your nuclei in a new place, and let the hive with the queen take the place of the hive on the old stand.

5. The plans outlined in 1 and 4 ought to work well, and these plans being your own gives them some advantage. If I should suggest anything else it would only be to repeat what I have given in "Forty Years Among the Bees," which you say you have, for I really don't believe that the locating of those six colonies at a distance of 100 yards cuts any figure in the case, nor the directions in which the entrances face; so I should proceed the same as if all were in the same apiary.



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FROM MANY FIELDS

Good Season for Honey.

I have had a good honey season this year. I started with 16 colonies, and increased to 23 by natural swarming. I have taken off 4220 pounds of extracted honey, all of which I have sold to my home customers.
LEWIS SCHMERTMAN.
Will Co., Ill., Jan. 9.

Egg-Hatching Humbug on a Colony of Bees.

Simply putting hens' eggs over a colony of bees and not having them hatch would not, in every case, prove that the whole pretense of the possibility of incubating hens' eggs by bees is a delusive lie, concocted out of nothing but a guess by some one who knows but little or nothing about the incubation of chickens, or bees either. For one missing link in the business would spoil the whole chain; and concerning the business, "one fact is worth a great deal of theory," so I will try to submit such a fact.

I resolved that I would not be rash in my conclusions, but I would give it a fair test. Now, I said, "If hens' eggs can be hatched by the warmth that rises from a colony of bees, I think that it would, evidently, have to be under the most favorable circumstances, and I resolved to give it the advantage of every possible circumstance; and I claim that the Common-Sense Bee-Hive has every point of superiority in that direction, as it is virtually a double-walled hive, having thick, closed-end frames inside a body-box or case. (Point 1 in favor of bee-hatched chickens.)

Some of you will remember that I announced the plan of this bee-hive several years ago, when a gentleman and scholar at Notre Dame took it up and tested it, and eulogized it. It has about 2000 square inches of comb-surface, which every bee-master knows will accommodate a good, large colony. (This would be good point No. 2.) My plan, also, joins the super-case directly to the brood-chamber, so as to avoid the waste of heat above the brood-chamber by the space usually allowed between them. This is to make a warm hive in the spring for early brood-rearing, and to invite the bees in the section-cases to work sooner than they would otherwise go there. (Large point No. 3.)

Then, I said, the hot summer weather, when the days are nearly warm enough to hatch eggs without the help of either chicks or bees, would surely be in favor of the project far beyond the uncertain spring weather with its freezing nights, so I will try them in the month of July, and this will make point No. 4 to its advantage. Then I took a rousing-big natural swarm, large enough for two colonies, and crowded them all in that hive. (A strong point No. 5. Point No. 6 was that the hive was well filled with full-cell brood comb.) Now if there was any hope in the case, would not these points that I comprehend in preparations made thus far reveal it?

And now we will look at the super. I took a neatly made case of ⅜-inch lumber, with a wire-screen bottom, and a thin rim to set down snugly on the top of the hive, so as to get all the heat among the eggs that the bees might send off; and over the screen-bottom of the super I put a thin piece of coarse burlap to make it less probable that the bees would glue up the meshes of the screen. I tore up a piece of bed-quilt, and made of it a large, soft roll and packed it around the inner sides of the super, leaving a nice, large nest in the middle for 25 select-brood Plymouth Rock eggs on the thin burlap bottom described.

Over this I put a light board-cover, amply quilted on the under side, and fitting down snugly, just over the tops of the eggs.

Now, every body who has brains enough to bait a mouse-trap, knows that all these conditions combined would fetch eggs to a hatching warmth if it were possible to do so over a colony of bees.

Now we will shut it up tightly, and leave them there to warm up. It won't take three weeks to test the matter, for the proof of the thing is right in touch, as you will soon see.

The colony had been hived for several days, as I was waiting to set one of my select Plymouth Rock hens in the park at the same time. She came to a sitting fever in good shape, so that I set her that same afternoon, and in about an hour's time she had her 15 eggs all nicely warmed up under her. Then I went and slipped my hand into the "super-nest" over the bee-hive—*and would you believe it*—all those 25 eggs were also *nice and c-c-c-c-cool!* So they were that night, and so they were the next morning, and the next evening they seemed to be just as cool as they were when I put them in.

Now, if those eggs would not get warm over a colony of bees in the middle of July, fixed that way with everything in their favor for 24 hours, how many years would it take to hatch them there? If an egg could be put right in the midst of a brood-chamber, and kept covered with bees with some way fixed to turn it over every day, it might hatch till it got open far enough for the bees to sting the chicken; but the eggs over a bee-hive I believe would *never* hatch. I might as well have put those eggs in a box right over my sitting hen and wait for them to hatch there. You can't hatch a cold egg, and I think that I have proven that the bees don't even get them warm.

Now, if you want to probe my testimony, just take a good thermometer and set it in a super-case over a colony of bees where the bees can't get up to it for a single night, and see before sunrise what temperature it will indicate; and if it is not pretty near 104 degrees F. you might keep eggs there forever and they would not hatch. Those fellows who have been telling their big stories to the contrary are evidently not trying to build up public confidence in their words; and may they sustain the loss they richly deserve.

COMMON-SENSE BEE-KEEPING.

Poor Season—Catnip.

It was a poor season for honey here last year. White and alsike clover yielded almost nothing, and sweet clover very little. The bees gathered some from wild mustard and from a few other plants of less importance from a bee-keeper's point of view.

Basswood is nearly all cut here, and I think that the few trees that we have yielded little or nothing this year. Catnip yielded as usual, but there is too little of it here to make much difference in the honey crop. I sowed some catnip seed last spring which I gathered in the fall of 1902, but none of it grew. Plenty of new plants came from self-sown seed. I think it should be sown in the fall.

JAMES L. HOWARD.

Milwaukee Co., Wis.

White Clover Flow—Good Prospects.

Not seeing any communications in the American Bee Journal from this locality, I thought it might interest some to learn the last season's experience of the bee-keepers of this vicinity. Old bee-keepers say it was the best they ever saw; the flow from white clover was never excelled, if equaled, and as a result we got a superior quality of honey. The tendency to swarm was beyond all control. My bees doubled, besides a number of prime swarms that took to the woods. The fall flow was light; there was an abundance of fall bloom, but it was so cold and wet that the bees could not get the nectar. But most of the bees went into winter quarters in good shape, though some were only fair.

Four carloads of honey have been sent from our town by local producers, besides large shipments for local consumption that would amount to several carloads more. The number of bees in this county is almost double what it was a year ago. The ground is now nicely covered with snow, which is favorable for the clover, and the outlook is good for another prosperous season next year.

R. H. BUCHNER.

Jackson Co., Iowa, Dec. 29.

Starvation Plan of Introducing Queens.

Remove the old queen in the forenoon, then about one hour before sundown remove the new queen from the escorts to a clean cage, where she can find no food; then a little after sundown let her run in at the hive-entrance. I have used this plan for the last 2 years, and have not lost a queen, and have often found her laying the next day.

This was a poor honey-year here; from 55 colonies I had only 900 pounds of honey, comb and extracted.

JOHN SUTER.

Seneca Co., N. Y., Dec. 29.

Had a Fair Honey Crop.

Bee-keepers in northwestern Pennsylvania are generally happy and sweet, and are feeling unusually encouraged on account of the past season's honey-flow. For some years we have had poor crops, and one or two years the crop was a total failure, so with a fair crop the past season comes encouragement. The white clover crop was profuse and yielded

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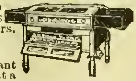

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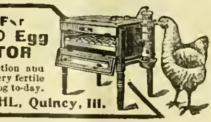

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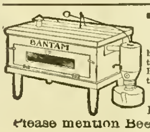

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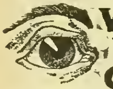

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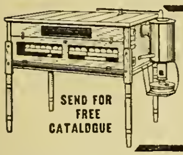

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well, and but for the dearth of fruit-blossoms last spring, which was the cause of many colonies not building up early, the yield of the honey crop would have been immense—that is, for this region.

Honey—basswood and clover—had ready sale at 15 cents a pound, wholesale, although much was sold early to the dealers at 12 cents by those who were afraid they might not get rid of their honey. I sold some of my honey to a dealer for 15 cents, who had previously bought at 12 cents and sold at 14 cents.

GEORGE SPITLER.
Crawford Co., Pa., Dec. 22.

Some California Bee-Notes.

Bees in this locality have not gathered much for two seasons. The weather was too cold in June, July and August.

Foul brood has quite a hold here, and we are really in need of an inspector.

Fruit-growers are awaking to the fact that bees are beneficial to their industry, and are placing colonies in their orchards.

We seem to be "up against" a honey combine, for buyers offer only 4¼ cents for white extracted honey, when last season they paid 5½ and 6 cents per pound. We have about 200 cases of water-white extracted, and 4¼ cents, f. o. b., is the best offer so far.

As alfalfa is being planted extensively here, it will no doubt, in time, be of much benefit to the apiarist.

C. K. ERCANBRACK.
Santa Cruz Co., Calif., Dec. 14.

Selling Candied Honey.

On Dec. 24 the bees were flying and moving around the entrance, denoting that they were clearing out dead bees that usually drop on the bottom-boards.

I note considerable being said, lately, about selling candied honey. Having quite a lot to sell, I put a small advertisement in our county newspaper, and had good results. I was selling liquid honey at 12½ cents per pound, but having rather slow sale. My advertisement said that customers could get the same honey in its candied state for 10 cents per pound, with the result that I ordered the advertisement taken out. I had never tried selling candied honey to any great extent, but customers say they like it better in the candied form than otherwise.

The plan of having several different size pails, from one pound up to 10 pounds, early in the fall, and then put honey in them and let it candy there when cold weather comes, is undoubtedly a wise suggestion. I have already tried some that way, and by so doing a vast amount of labor is saved. I charge enough for the can or pail to pay for the same.

J. M. YOUNG.
Cass Co., Nebr., Dec. 26.

Drone-Laying Queen—Report.

Has any one had an experience with drone-laying like this? I had a young queen last summer that laid drone-eggs for about 3 weeks, and after that they were all worker-eggs, and the colony got to be as strong as any I had.

From 4 colonies, spring count, I got 700 pounds of comb honey, and increased to 10 colonies. I lost 1 prime swarm and 3 after-swarms.

A. P. RAUGHT.
Lake Co., Ill., Dec. 19.

Hatching Eggs Over Bees.

On page 840, Mrs. Sarah J. Griffith asked for the number of the Journal in which the article on the bee-hive incubator was published. It was in No. 34, of 1900—Aug. 23.

I was very much interested in the article at the time, and decided to try the plan at the first opportunity. I am preparing to try it about the middle of next month.

Last summer I wrote Mr. J. G. Norton, the author of the article, and enclosed a 2-cent stamp asking if he had changed his mind in any way as to the success of the plan: and if he would advise me to try it. I waited 2 or 3 weeks, and receiving no reply I wrote him again, this time enclosing a return postal card, and asking him simply to write "Yes" or "No," if he was too busy to write a letter. I received no reply to this. He must have received the letters or they would have been returned to me. I have thought, perhaps he had a good thing and did not care to share it with any one else, unless there was something in it for him, as in his first article on the subject he said he had applied—I supposed he meant—for a patent, and would have the plan before the public before next spring. As the present is the time to prepare for it, why would it not be a good plan for the American Bee Journal to re-publish the article so that any bee-keeper who would like to do so may try it, starting about the same time as the bees begin hatching? A. W. MACBRAIR.

Hamilton Co., Ohio, Jan. 6.

[Suppose you read the report on this subject as given by "Common-Sense Bee-Keeping," on another page of this very number. If you want to hatch hens' eggs, get a live hen, or incubator. Don't waste time in trying to get bees to do something different from what they were intended to do.

And here comes another report:—EDITOR.]

In answer to Miss Wilson as to hatching eggs with bees, I will own that I was the loser of 14 eggs last spring; it makes me laugh when I think of it.

My mother is a great lover of chickens, but has not kept any for quite a few years, owing to being so close to neighbors' fields. But last spring I asked her how she would like to see me hatch a fine sitting of eggs without a hen. She said she would like to see me do it before she would believe it, but would be glad to accept the clutch of fine chickens. Of course, I could see the 14 snow-white chicks running around—in my mind.

So off I started, and got a hive ready to make into a fine old "hen." I had a rousing colony of bees, so I got a super and put a screen in the bottom, and padded the sides with some pieces of old carpet. Next I sent my little brother 3 miles for eggs, which cost me $1.00, but I got good measure—14 eggs for a sitting.

Well, I put the eggs on the screen and covered them with 3 layers of carpet, marking the date. I used to go and turn them 2 or 3 times

Texas Queens!

3 and 5 banded Goldens from a reliable breeder. You all know him—**DANIEL WURTH**—the Queen Specialist—who fills orders by Return Mail. I am here to stay, and thank my many friends and patrons for their liberal patronage in the past. Wishing you all a Happy New Year, I am ready as usual to furnish you with the best of Queens. Tested, in March and April, $1.25 each; Untested, in April and May, $1.00 each; 6 for $5.00. Breeders, yellow all over, $3.00 each. I am booking orders for early delivery.

DANIEL WURTH, Karnes City, Tex.

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CINCINNATI, OHIO.

a week. During the last week mam would ask me how her chickens were coming on. I told her I could hear them peeping! So we waited for the 21 days, and when it came we went to get the chickens. But, my! there were no chickens there. So we broke the eggs, and from the first to the last of them they were about as fresh as if they were just laid the day before. So ma had a good laugh at me, and I didn't blame her a bit—I had to laugh, too.

Ma said it must have been the bees I heard peeping. I said, "I guess it was."

So all our bee-keeping brothers and sisters can laugh with us. James P. Kane.

Dubuque Co., Iowa, Dec. 31.

["Good-bye" to another impractical idea. —Editor.]

LARGEST
Clover, Grasses, Timothy and Fodder Plant Seed Growers
in the U.S. Operate over 5000 acres.

FOR 8 CENTS
and the name of this paper we will mail, free, samples of Clover, Grasses, Fodder Plants, etc., together with mammoth 140 page Seed Catalogue, well worth $100 to every wide awake farmer. Send to-day. F. 04.

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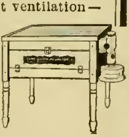
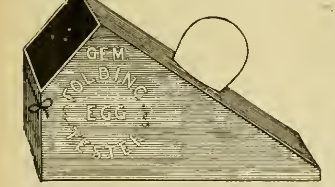


An Egg-Tester Free, together with an incubator and brooder catalog, containing among much other valuable and interesting information a colored plate, showing by 18 views of the development of the chick in the shell, free, by mentioning the American Bee Journal and sending to Geo. H. Stahl, Quincy, Ill., 4 cents to pay for postage and package.



Please mention Bee Journal when writing Advertisers.

CONVENTION NOTICE.

Wisconsin.—The annual convention of the Wisconsin State Bee-Keepers' Association will be held in the Capitol, at Madison, on Wednesday and Thursday, Feb. 3 and 4, beginning at 10 a.m., Wednesday. We are and have been doing our utmost to make this the most enthusiastic convention ever held in the State, and a most complete and interesting program will be presented. We are at this time assured of 8 papers on interesting subjects, by prominent bee-keepers, among them George W. York, W. Z. Hutchinson, and of course President and General Manager France. A free to all question-box will also be a part of the program. We urgently invite all who are not members, to participate with us; it will pay you in every way—in fact the social part alone is worth it. Come and get acquainted with our visitors and the bee keepers of the State. Reduced rates will be given by the hotels, and the railroad fare will be 1⅓ for the round trip. Just ask your agent for a 1⅓ fare round-trip ticket. It will save lots of time if members, and all those wishing to become such, will remit their annual dues to me prior to the convention. The dues are $1.00, which also makes you a member of the National Association. Exhibits of honey are solicited, and suitable premiums will be awarded. Gus Dittmer, Sec.

Augusta, Wis.

GOOD BEE-HIVE CHEAP!
Called the poor man's hive. Either 8 frame or 10. Sections sold at last year's prices. Full line of SUPPLIES. Subscription to bee-journals with orders. Send for list.
R. D. 3. W. D. SOPER, Jackson, Mich.
3Atf Please mention the Bee Journal.

The Kind of Garden-Tool you use has about everything to do with the success of the crop, as well as the pleasure people get out of the calling. The line of Planet, Jr. tools is suited to every purpose. The users all tell the same story. One of them in Iowa, C. F. Sanderson, of Linn Junction, puts it this way: "I purchased a No. 4 Drill of Hamilton Brothers. It is the best tool of the kind I ever saw. It can be used in so many different ways. You can discover a new use for it every time you see it." Don't fail to note the Planet, Jr. advertisement elsewhere, and please mention the Bee Journal when writing.

Wanted To buy FANCY COMB HONEY in no-drip cases; also amber Extracted in barrels; spot cash
C. M. SCOTT & CO.
1004 E. Wash. Street, Indianapolis, Ind.
1Atf Please mention the Bee Journal.

WANTED—Comb Honey in quantity lots. We are perhaps the only dealers in this article owning as much as 150,000 pounds at one time. Please state quantity, quality and price asked for your offerings, Thos. C. Stanley & Son,
24Atf Manzanola, Colo., or Fairfield, Ill.
Please mention Bee Journal when writing.

WANTED! FANCY COMB HONEY
In no-drip shipping-cases. Also Amber Extracted in barrels or cans. Quote your best price delivered Cincinnati. The Fred W. Muth Co.
32Atf Front and Walnut, Cincinnati, Ohio
Please mention Bee Journal when writing

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25 years the best. Send for Circular.
Smokers
25Atf T. F. BINGHAM, Farwell, Mich.
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Mount Union College
—:—
Open to both sexes from the beginning. Founded in 1846. Highest grade scholarship. First-class reputation. 25 instructors. Alumni and students occupying highest positions in Church and State. Expenses lower than other colleges of equal grade. Any young person with tact and energy can have an education. We invite correspondence. Send for catalog.
MOUNT UNION COLLEGE,
Alliance, Ohio.

Please mention Bee Journal when writing.

HONEY AND BEESWAX

MARKET QUOTATIONS

Chicago, Jan. 8.—The new year opens with a quiet trade in honey, retailers having usually a supply from the stock laid in to make a good show at the holiday time. Prices are without essential change in No. 1 to fancy comb, which brings about 13c; very little doing in off grades at from 1@3c less. Extracted, white grades, bring from 6@7c, according to flavor and other qualities; ambers about 1c less; especially weak are those lacking in flavor and body. Beeswax steady at 28@30c.

R. A. Burnett & Co.

Cincinnati, Jan. 8.—The market on comb honey has weakened, as the supply has been larger than the demand. Fancy water-white, 14c; off grades, lower. Extracted, amber, in barrels, 5¼@5¾c; in 60-lb. cans, ½c more; alfalfa, water-white, 6@6½c; fancy white clover, 7@8c. Beeswax, good demand; 30c for nice.

C. H. W. Weber.

Philadelphia, Jan. 13.—There has been very little call for honey since the holidays. The first two weeks of the year are the dullest during the season; people become somewhat surfeited with sweets, lessening the demand. The market is somewhat weaker, with quite a few arrivals. We quote fancy comb at 15@16c; No. 1, 13@14c; amber, 12c. Extracted, white, 7½@8c; amber, 6@7c. Beeswax, 31c. We are producers of honey and do not handle on commission.

Wm. A. Selser.

Albany, N. Y., Jan. 15.—Honey mrket extremely dull since the holidays and cold weather. Quotations are nominal, and asking prices mostly. We are quoting 15c for fancy white; 14c for A No. 1; 12@13c for dark and mixed, but would shade these prices now rather than lose sales. Extracted, inquiry improving somewhat, especially on the buckwheat and darker grades. H. R. Wright.

Cincinnati, Nov. 20.—The demand for comb honey is slower now than it was six weeks ago, owing to the enormous quantities offered on all sides. Fancy comb is sold in single case lots at 14c. The supply of extracted honey is big, although the demand is good. We are selling amber extracted in barrels at 5¾@6½c. White clover, in barrels and cans, 7½@8½c, according to quality. Beeswax, 30c.

The Fred W. Muth Co.

Boston, Dec. 21.—The demand for honey continues good, with an ample supply of comb, and a light supply of extracted. We quote our market as follows: Fancy white comb, 16@17c; No. 1, 14@15c; and practically no No. 2 to offer. Extracted, 7@8c, as to quality.

Blake, Scott & Lee.

Kansas City, Dec. 30.—Instead of our honey market improving, it has grown worse as far as comb is concerned. The receipts have increased and fancy comb and No. 1 have been sold as low as $2.50 per case of 24 sections. We do not look for any improvement in prices before February, if then. We quote: Fancy white comb, 24 section cases, $2.60; No. 1, $2.50; No. 2, $2.40. Extracted, white, per lb., 7@7½c; amber, 6@6½c. Beeswax, 25@28c.

C. C. Clemons & Co.

New York, Dec. 4.—Comb honey is arriving in sufficient quantities to supply the demand, and, as to the quality, most of the white honey seems to be off color, more or less. We quote fancy white at 14c; No. 1 at 13c; amber, 11@12c; and buckwheat, 10c. Extracted, light amber, at 6c; white, 6½c; Southern, 55@60c per gallon; buckwheat, 5½c. Beeswax, 28@29c.

Hildreth & Segelken.

San Francisco, Jan. 6.—White comb, 1-lb. frames, 13@14 cents; amber, 9@11c. Extracted, white, 5½@6c; light amber, 4½@5c; amber, 4@4½c; dark amber, 3½@4c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

Spot stocks are not particularly heavy, but trade is slow. Only for most select qualities does the market show firmness.

HONEY AND BEESWAX
When consigning, buying or selling, consu
R. A. BURNETT & CO.,
199 South Water St. Chicago, Ill.

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The Best Bee-Goods in the World....

are no better than those we make, and the chances are that they are not so good. If you buy of us **you will not be disappointed. We are undersold by no one.** Send for new catalog and price-list and free copy of THE AMERICAN BEE-KEEPER; in its thirteenth year; 50 cents a year; especially for beginners.

—THE—
W. T. Falconer Mfg. Co.,
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W. M. GERRISH, Epping, N.H., carries a full line of our goods at catalog prices. Order of him and save the freight.

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Apiaries—Glen Cove, L.I. Catalog free.

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ST. LOUIS, 1904.

Bee-Keepers' Supplies Galore.
Catalog Free.
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Bees, Honey and Beeswax bought and sold for cash.
LEAHY MFG. CO.,
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Bee=Supplies!

Don't Wait Any Longer to Buy.
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Write us to-day and say what you want, and get our prices. New catalog will soon be out; it is free.
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Hoosier Incubators and Brooders.
C. M. Scott & Co.
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BOSTON
Money in Bees for you.
Catalog price on
ROOT'S SUPPLIES.
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Sen name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

Bee=Keepers' Supplies
OF ALL KINDS.

Langstroth on the Honey-Bee—Revised
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

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Illustrating, describing and listing all of the standard, finest and up-to-date articles used by
BEE-KEEPERS.

Send for a copy at once. **Discount for Early Orders.**
Three percent during January.

Lewis One-Piece Highly Polished Sections are perfect. Fifteen Millions sold last year.
All parts of our Hives are made to Fit Accurately. Perfect Workmanship and Finest Material. No trouble in setting them up. Our customers say it is a pleasure. We are not selling goods on NAME ONLY, but on their QUALITY.
Twenty Thousand Additional Square Feet of floor-space just added to our plant. We now have over Forty-Five Thousand square feet of floor-space. We certainly can take care of your orders promptly. Remember That.

Two New Features.

Our Acme Hive, the shallow body style, simple and cheap. Our New Wisconsin Hive, a Portico Front, and the same inside arrangement as the regular dovetailed.

One of Many.

NEW HAVEN, IOWA, June 27, 1903.
G. B. LEWIS CO., Watertown, Wis.
GENTLEMEN:—I must say something in regard to the goods you have sent me. They are very good, and I received them in fine condition and consider same cheap. Some people make their own hives, but I think this is a foolish plan when you can get goods like this well made, neatly finished and in such perfect condition. I have used 1000 sections and find everything all right. If anybody wants to know where to send for the best bee-supplies, tell them to write to me.
Yours for business,
BENNIE DIEDERICH.

Complete list of Agencies will be found in Catalog.

G. B. LEWIS COMPANY,
Manufacturers Bee-Keepers' Supplies,
WATERTOWN, WIS., U. S. A.

Chicago-Northwestern Report.
(See page 55.)

Feeding Bees in Winter.
C. P. DADANT.

ICULTURA
COLLEG

AMERICAN BEE JOURNAL

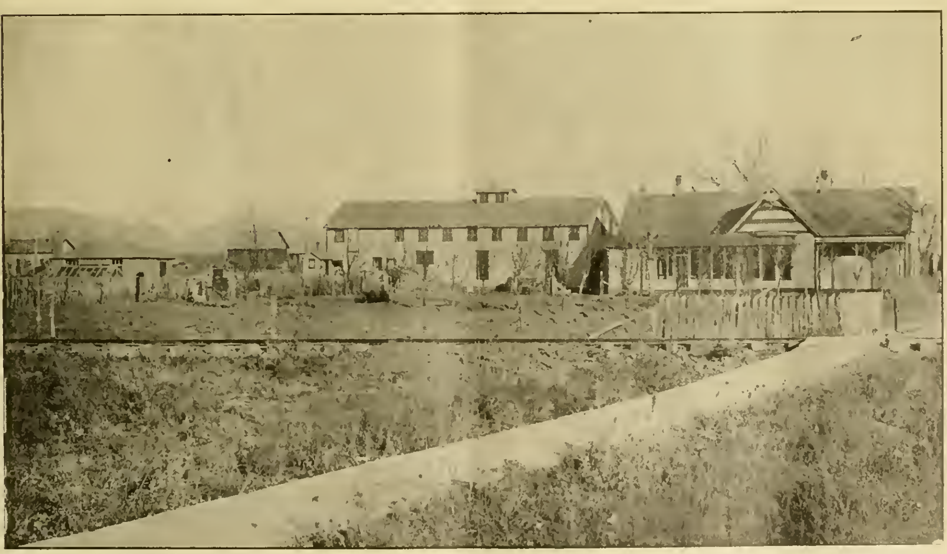
WEEKLY—$1.00 A YEAR.

Published by GEORGE W. YORK & CO., 144 & 146 E. Erie Street.

44th Year. CHICAGO, ILL., JAN. 28, 1904. No. 4.

APIARY OF L. HIGHBARGER, OF OGLE CO., ILL.
(See page 52.)

APIARY OF
GEO. L. SEWARD, OF MARION CO., OREG.



HONEY-HOUSE AND HOME OF R. C. AIKIN, OF LARIMER CO., COLO.—Rocky Mountains in the Background.

ROOT'S BEE-SUPPLIES The Best Quality Known the World Over

1904 Catalog (93rd edition) free. Also sample Gleanings in Bee-Culture.

Be sure you get Supplies bearing this TRADE-MARK.

Don't take our opinion but read what our customers say.

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MEDINA, OHIO.

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·BEE-KEEPERS SUPPLIES·

Our goods are sold only by the best dealers. Agents for them are found in all countries.

IT INSURES YOUR GETTING BEST QUALITY.

TESTIMONIALS.

"I have some of your hives in use, and I find they give more satisfaction than any other hive in the market. If all goes well I will be ordering more of them before long."
Cape Colony, South Africa. R. J. King.

⁂

The bee-fixtures that I ordered of you came to hand in good order, and are the finest work I ever saw. Every thing went together like the leaves of a book. The supers fit my Quinby hives perfectly, and are sure to give better satisfaction, although costing a little more than what I could have got them for from your agent in Portland, Oreg. Thanks for your promptness in filling my order for odd sizes.
H. A. March.
Fidalgo, Wash.

⁂

"I have been using the fence separator, and find them much superior to solid goods. The 450 shallow hives you made for me are giving good satisfaction."
Vigo, Tex. J. E. Chambers.

⁂

I have just now unpacked and examined the goods sent by you, and am greatly pleased with the lot.
Scottsville, Ariz. W. H. Gill.

⁂

These hives have proven very satisfactory, and I now wish 25 more of the same kind.
Very truly yours,
Tecumseh, Mich. P. W. A. Fitsimmons.

⁂

While writing you this, I must say the hives I ordered of you were first-class in every particular, and not one mistake.
F. L. Powers.
Artemisa, Cuba, W. I.

A. I. Root Co., Medina, Ohio, U. S. A.
Dear Sirs:—The shipment of hives and bee-supplies, which you sent me, arrived in excellent condition, and every one who has seen them, is delighted with the accuracy and precision of the workmanship of every detail, both of the goods and the manner in which the order was executed.
Yours very truly,
Cape Colony. Frederic T. Bioletti.

⁂

"People are beginning to change their bees to the Root hive. My trade being so much better this season than previous years."
Yours for service,
Pennville, Ind. Alfred Grissom.

⁂

The A. I. Root Company, Medina, Ohio.
Gentlemen:—I am well pleased with your prompt way of doing business. The goods are just simply nice. Many thanks.
Yours truly,
John D. A. Fisher.

⁂

The goods ordered have arrived, and are very fine, giving entire satisfaction, as is invariably the rule when ordering from you. Allow me to thank you for your promptness which I appreciate more this time than usual, as I needed the goods very much. I can get goods from your factory in about the same time that it takes to receive a reply from some parties at no greater distance. W. A. Klock.
Herkimer, N. Y.

⁂

Your chaff hive, the last one, is the thing. I had them out with no protection, not a fence or tree, and the north wind howling around them with mercury at 42 degrees below, and that wide entrance all open. I did not expect them to come through. It seemed that enough arctic cold would come in the entrance to freeze brass bees; but these came out strong in spring. S. J. Harmeling.
Marion, S. D.

BRANCH OFFICES.
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PHILADELPHIA, PA., 10 Vine Street.
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HAVANA, CUBA, San Ignacio 17.

ESTABLISHT IN 1861
AMERICAN
THE OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL
Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

GEORGE W. YORK, Editor. CHICAGO, ILL., JAN. 28, 1904. Vol. XLIV—No. 4.

Editorial Comments

A Double Number This Week.

Did you notice it? Just 32 pages of the old American Bee Journal this time. But we don't suppose any one will object to it, if *we* don't.

This number should serve for two pretty good meals of apiarian literature. And the prospects are for a few more double numbers later on. We think it will not be our fault if any reader does not get "value received" for his investment of a dollar for the American Bee Journal for 1904.

Is Disposition Inherited from the Drone?

EDITOR AMERICAN BEE JOURNAL—

Can't you get an article from Prof. Benton as to the basis for his belief—recently expressed in your columns—that the drone gives the trait of gentleness or crossness? Some of us would like to know if he can *prove* it.

ROXBURY.

It might not be an easy thing to prove directly from the bees themselves that the trait of gentleness is inherited from the drone, even though it might be the accepted belief that, in general, traits of character are inherited from the male parent. Is there, however, entire agreement upon this? and is there anything like positive proof in the case? Space will be gladly given to Prof. Benton, or any one else who can answer satisfactorily.

Plain Board Covers.

These are not so much in use as they were a few years ago. The objection is made that in spite of cleating they warp, and even if held rigidly by iron cleats without the possibility of warping, they will still twist. But aside from the objections urged against them, Editor Root gives another reason why they are going out of use. He says in Gleanings in Bee-Culture:

> "The fact is, clear wide boards in sufficient quantities to care for the trade for such covers can not be bought at any price. The big pine trees are nearly all gone. Manufacturers have simply been *compelled* to adopt a roof covered with paper or metal, or some form of three-piece design that would permit of the use of one or more narrow boards spanned by a ridge-piece to close up the cracks. Such boards are readily obtainable at a moderate price, because the small trees are not all cut out yet."

Performance Before Prettiness.

There are not a few who favor breeding from queens whose colonies have distinguished themselves in the matter of storing without regard to pedigree or color. With proper precautions it may be a good thing to do. "A York County Bee-Keeper" says in the Canadian Bee Journal:

> This brings to my mind my experience with a colony of genuine "blacks" the past two seasons. A year ago they stored something over 350 pounds, and the past season over 250 pounds of choice clover honey, never swarming either year. Although they are quite irritable to work with, yet this fall I took extra care to put them in good condition for wintering, for notwithstanding the fact that there are some choice queens of both the Italian and Carniolan races in that yard, I would not care if the whole apiary were of the strain mentioned, even f I did have a little extra stinging while working with them.

Big Average Yields of Honey.

Estimating 100 pounds of comb honey as equaling 150 pounds of extracted, and reducing all to extracted, the following large average yields per colony may be gleaned from the report of the National Association:

Harry Lathrop, Wis ...	125	H. W. Lee, Ill.........	155
Ernest J. Smale, Calif..	127	Byron Whitney, Ill.....	156
Jos. Scroggins, Mo.....	127	E. J. Baxter, Ill........	158
Chas. A. Brown, Calif..	128	W. S. King, Calif......	161
Mrs. L. S. Coleman, Utah	129	Robert Taylor, Ill......	169
Harry K. Warren, Nev..	130	Andrew Nelson, Utah..	172
D. C. McLeod, Ill......	133	Geo. W. Rowley, Calif..	178
H. J. Chapman, Iowa..	133	Henry Ahlers, Wis.....	195
N. E. France, Wis......	135	J. A. Delano, Calif.....	200
C. P. Dadant, Ill........	136	Ole Sorenson, Utah....	200
C. H. Pierce, Wis........	137	Christian Nielson, Utah	223
Anthony Schmidt, Wis.	137	Rev. H. A. Winters, Wis.	225
Mack Shrontz, Ill......	141	W. T. Brite, Tex.......	230
N. Louffburrow, Kan...	143	S. S. Brite, Tex.........	230
W. D. Moffatt, Calif...	145	Dr. C. C. Miller, Ill....	231
Rall Baker, Wis.........	145	C. K. Ercanbrack, Calif.	233
E. B. Tyrrell, Mich.....	148	G. W. Vangundy, Utah.	296
L. Stachelhausen, Tex..	148	L. A. Hammond, Md...	388
J. T. Hairston, Ind.Ter.	150	Rev. R. B. McCain, Ill.	395
Dr. H. Copley, Ill......	153	C. H. Stordock, Wis....	411

Two others are given with figures far exceeding any of these: Franklin Young, of Utah, 1333, and W. A. Pain, Haw. Is., 1500; but there must surely be a mistake in some of the figures that would give such averages.

It may be observed that the increase throughout the list is quite gradual till it comes to the last four, and they seem to be in a class by themselves. We may account for the unusual averages of Messrs. Hammond and McCain partly by the fact that the former had only 4 colonies and the latter 2; but Mr. Vangundy had 109 colonies which yielded 175 pounds comb and 32,000 extracted, while Mr. Stordock, with 94 colonies, had the very remarkable yield of 15,500 pounds comb honey and 15,400 pounds extracted!

Tight vs. Loose Horizontal Wiring.

Some insist that when brood-frames are wired horizontally the wires must be left slack if there is to be no buckling or sagging, while others say there is no trouble with horizontal wires tightly drawn. M. W. Shepherd is perhaps the first to give the philosophy of the buckling in some cases, and thinks if the end-bars are sufficiently thick the trouble will disappear. He gives in Gleanings in Bee-Culture this explanation for the buckling that occurs with tight wiring:

> "The end-bars, only ¼-inch thick, are too light. When you pull the wire tight, the end-bars spring in as the bees keep adding weight. The end-bars spring in more and more; and how can buckling be helped? The wire *slacks*, and that tells the story. This is how it works with us."

Read Up Your Bee-Papers Now.

Last summer you were so busy that you hadn't time to read your bee-papers carefully. Read them over at your leisure now, and you may find a good many new things in them.

Prime Swarms Settling Low.

In a first prize article in the Australasian Bee-Keeper, in his instructions for hiving a prime swarm, George W. Commins says to get a hive ready with frames, starters or foundation, bottom-board, quilt, all complete, "carry to where the bees have clustered, by putting an empty box or step-ladder under them you can raise the hive until the frames touch the cluster, then brush them onto frames." "This method," says he, "will answer for all early swarms, because old queens always settle near enough to the ground to get the hive up to the cluster."

The question is: Do prime swarms on this side the globe, when they have opportunities for settling on higher places, always cluster so low that they may be reached from a box or step-ladder? Do they generally?

The Veterans Read the Bee-Papers.

Those who have already achieved success at bee-keeping are the very ones who take the most bee-papers and do the most reading. The time never comes when one has finished learning all there is to be learned about bee-keeping. The beginner who gives the most diligent study to the pursuit upon first entering it, is likely to be the one farthest on when he becomes a veteran.

Miscellaneous Items

Mr. Geo. L. Seward's Bee-Shed Apiary is shown on the first page. He says it is "the best protection for hives in this locality. The shed is 45 feet long, 7 feet wide, and gives room enough to stand erect, or run a wheelbarrow behind the hives."

* * *

The Apiary of Mr. Highbarger is pictured on the first page this week. It contained 60 colonies the past season, and produced 3000 pounds of comb honey. Mr. Highbarger is one of the older bee-keepers, and has been a constant reader of the American Bee Journal for many years.

* * *

An Apiarian "Conumberfum."—We found the following in one of our exchanges last week:

> Why is a bee-hive like a bad potato? Ans.—A bee-hive is a bee holder; a beholder is a spectator; and a specked 'tater is a bad 'tater.

We might have sent the question to Dr. Miller, and then afterward compared his answer with the one given above. But we knew pretty well what his answer would be. Simply, "I don't know."

* * *

Split Sections are what Mr. A. Coppin used in his exhibit at the Illinois State Fair, as mentioned on page 20. There was an error in the size. His sections are 4¼x5 instead of 4x5, as stated. He has the comb foundation made 5x17 inches, and puts the full sheet between the halves of a row of 4 sections all at one time; then by wedging up the sections the foundation is held firmly in place, and also a full sheet of foundation is thus in each section. There is no falling down of full sheets or starters in this way. Mr. J. C. Wheeler and others follow the same plan, and like it.

* * *

The Chicago-Northwestern Convention Report is begun in this issue. The whole of the report is twice as long as that of the National held at Los Angeles. It was an enthusiastic gathering here in Chicago early last December. They did business all the time. Any one who fails to attend an annual meeting of the Chicago-Northwestern misses a good, profitable time. Every bee-keeper within 200 or 300 miles of Chicago ought to make a desperate effort to be present. There is no good reason why Chicago should not have the largest annual meeting of bee-keepers held anywhere in the United States.

* * *

The Onondaga County Bee-Keepers' Association met in Syracuse, N. Y., Thursday Jan. 14, 1904. Pres. S. D. House occupied the chair. Owing to blockades of snow the attendance was rather small, but those present were naturally the most enthusiastic members. Mr. Irving Kenyon gave an address on improved methods of producing comb honey, in which were many good points, and Mr. W. J. Morgan gave his experience in carbonizing comb honey to destroy wax-worms. A lively discussion followed.

At the afternoon session, N. E. France spoke on the work of the National Bee-Keepers' Association, and W. Z. Hutchinson conducted a question-drawer.

In the evening, Prof. Thwing, of Syracuse University, spoke on questions connected with location; R. F. Holtermann on the prevention of swarming, and N. N. Betsinger, Moderator, in his report urged the production of a better class of honey. Officers the same as last year were elected, except that the Moderator is Mr. Kenyon.

We hope soon to publish a report of this convention.

* * *

An Inspector's Association for mutual help and exchange of ideas was organized at Syracuse, N. Y., recently, by Messrs. France, Hutchinson, Stewart, Stevens, West, and Wright, inspectors of bee-diseases. It will probably be made national. Such an organization should be able to help secure laws against bee-diseases in those States where no such laws exist. We wish great success to the new organization. May it never *need* inspection!

* * *

Mr. N. Staininger, of Cedar Co., Iowa, was so unfortunate as to have had two daughters in the awful Iroquois Theatre fire, which occurred here in Chicago, Dec. 30. They were badly burned, and were not able to leave the hospital for two or three weeks after the fire. As most of our readers know, there were about 600 people burned to death, and several hundred others burned and injured so that they will likely be disfigured or maimed for life. Aside from the fire danger, we think the great majority of theatrical performances are pretty good things to stay away from. We attended our last just 20 years ago next April, in company with Mr. Thomas G. Newman. We have never had any desire to go again.

* * *

Mr. Howard Miller, editor of The Inglenook Magazine, some time ago visited the home and apiary of Mr. J. E. Thompson, Sr., in Kane Co., Ill. As a result, a very readable article on bees and honey appeared in The Inglenook for Aug. 25. It is always a good thing for bee-keepers to invite the editors of local newspapers or magazines to inspect their apiaries. It almost invariably results in the publication of an article on the use of honey, which will help increase its demand. All such things help the bee-keepers. Also, the information about the keeping of bees and the production of honey is a good thing to have scattered among the people. Don't forget to invite your local editor to spend a half day in your apiary next season. Then see to it that he takes home with him a nice little memento that will keep him and his family sweet for a week or two.

* * *

The New York State Association of Bee-Keepers' Societies met in Syracuse Friday, Jan. 15, 1904, Pres. W. F. Marks occupying the chair. Among those present were General Manager N. E. France, W. Z. Hutchinson, Chas. Stewart, Mortimer Stevens, N. D. West, and W. D. Wright, foul brood inspector in New York State, and R. F. Holtermann and Morley Pettit, of Canada.

In his opening address Pres. Marks laid particular stress on the enforcement of the pure honey law. Other addresses were given by N. E. France on diseases of bees, N. D. West on foul and black brood, R. F. Holtermann on marketing honey, and O. L. Hershiser on crop reports.

The staff of officers were all re-elected.

We expect to publish a report of this convention later.

* * *

Mr. A. T. Cook, of Hyde Park, N. Y., is in the seed business. His catalog is unique. He is also interested in the crop of boys and girls that are being brought up in this country. That being the case, he has scattered all through his seed catalog some good advice for young people, as well as for older folks, too. Here are a couple samples:

TO MY FRIENDS—THE BOYS.

Please do not use tobacco. It will enslave your mind, defile your body, and waste your money. If you *have* begun—take my advice and stop at once, and you will be grateful all the days of your life.

Be temperate. Shun the deadly, soul-destroying saloons. Let your motto be, "Touch not, Taste not, Handle not the Intoxicating Cup." Be brave enough to be above temptation, and dare to do the right.

Your friend, A. T. Cook.

We can never be too careful what the seed our hands shall sow;
Love from love is sure to ripen, hate from hate is sure to grow.
Seed of good or ill we scatter heedlessly along our way,
But a glad or grievous fruitage waits us at the harvest day.

Contributed Articles

Feeding Bees in Winter—Sugar Candy

BY C. P. DADANT.

"I have a colony of bees that has been neglected and is very light, I do not believe that they have honey enough to last them to the end of the month. How would you feed them? Would you advise using the Hill atmospheric bee-feeder, which you have recommended?"—ILLINOIS.

Feeding bees in the winter after they have ceased to fly has always been a risky task. Even if the weather is warm enough for the bees to be able to go about the hive a little, if they are fed they are induced to fly out more or less, for the feeding of liquid food gives them the idea that there is something to be found in the field. But if the weather is cold, they are unable to reach the food, or, if they can reach it, they are apt to stir about and some of the bees will get chilled by leaving the cluster. The feeding of liquid food, unless it is in exact quantities so as to leave no residue in their intestines, will compel them to seek flight. The more liquid the food, the more necessary it is for them to be at liberty to take wing.

We would therefore deprecate the feeding of honey or sugar syrup in the hive in winter. But there is a method by which bees may be fed sufficiently to keep them alive till the weather is warm enough for them to take and use liquid food. It is by feeding candy. This food is taken with more difficulty by the bees than sugar syrup or honey, and they seem to use it only as far as their immediate needs require. It does not excite them, does not prompt them to leave the cluster in search of more, in fact it seems to be to them as that much sealed honey, to be used when they want it. For it is a fact well known to apiarists, that although honey and sugar syrup fed in the liquid form in any sort of feeder cause the bees to stir, and promote and increase breeding, the same quantity of honey furnished to them in clean, sealed combs does not excite them, and they use it sparingly as needed, just as they would if it was their own stores.

This candy for bee-feed is not a new thing. The first suggestion of it belongs to a German apiarist—Weigel, of Silesia—who, more than half a century ago, recommended its use, and it was very much commended by German apiarists. The method of preparing it was given in the early editions of Langstroth. He recommended brown Havana sugar mixed with enough water to dissolve it, and boiled until the water was evaporated. Later it has been found much better to use the best granulated sugar with as little water as possible. Stir this constantly while heating, so that it will not burn, for burnt sugar is not nourishing, and would be a dead weight on their stomachs, and therefore much worse than no food at all. To know when it is done, all that is required is to dip your finger, first in cold water, then into the syrup. If what adheres to the finger is brittle, it is boiled enough.

It is then poured into shallow pans or on thin paper, and allowed to form into cakes. The pan should be slightly greased to keep it from sticking. The cakes are then broken into pieces of what ever size you may wish, and placed over the cluster in the hive. The quantity of such candy to be given to the bees need not be very great. It is very rich food, does not contain more moisture than they require, and so there is no loss. Three or four pounds will help a colony along quite a while, though of course very much depends upon the strength of the colony and the temperature.

The feeding of bees in this way, on their summer stands, is not generally successful because the bees are often unable to move owing to the cold. So they may starve almost in reach of the food, unless it is given on a warm day, when they will be able to move up to it. Of course, the space above the feed must be kept warm, that is, the upper story must not be left empty. On the contrary, it would best be filled with a cushion or some absorbents which although helping to remove the moisture will nevertheless prevent a current of cold air from passing through.

A much better way yet is to remove the colony to the cellar. It is not necessary to have a special cellar. One or two destitute colonies may be kept through the cold weather, in a dark corner of any ordinary cellar. The main requirements are quiet and darkness. If the cellar is too light, a very efficient partition may be made by hanging an old carpet between the hive and the light. The greatest objection to cellars is the warmth, generated by the bees, which causes them to be restless; but a cellar that will keep potatoes without freezing will keep two or three colonies very nicely, for their warmth is insufficient to raise the temperature.

Usually, destitute colonies are weak, and such colonies are easily carried in and out. They are not heavy, and not easily aroused. We have kept small colonies often in an ordinary cellar with the hive-cover entirely off, placing the candy over the frames and simple covering the hive with a thick cloth. So, without much trouble, the condition of the bees can be ascertained at any time, and more feed may be added, by using the precaution of avoiding a jar, that would disturb them.

Honey-sugar candy, or what is called the "Scholz" candy, or "Good" candy—thus named from the two persons who first recommended it, Mr. Scholz in Germany, and Mr. Good in the United States later—is also very good bee-feed. It is used mainly in mailing of queen-bees, or transporting of colonies that are without food. This candy is made by heating a little honey and mixing with it as much pulverized sugar as it will absorb, until the mass is hardened to a thick paste. The honey is heated in order that it may absorb the more sugar. If it were not heated, it would soften when placed under the influence of the bees' warmth, and might liquefy enough to run. In either case it is very important not to overheat the honey or the sugar, and the very best grade of either must be used so as to avoid the feeding to the bees of any foreign substance that would increase the load in their intestines during the time of their confinement.

Hancock Co., Ill.

Observatory Hives for Learning Bee-Habits.

BY ALLEN LATHAM.

We may read all about the actions of bees inside their hives and accept as truth all that we read. It is thus that error gets well-grounded until a later observer of independent thought comes forward with the truth (as he sees it). Possibly both observers are right, at least saw the same thing. Why, then, do they not agree? Presumably because they interpret differently. After having interpreted an action in a certain way, that observer will hereafter have perverted vision.

The late controversy between Messrs. Dadant and Miller was a source of enjoyment, and fun as well, to me. Neither one (in my opinion) was wholly right or wholly wrong, and in some instances, surely, they agree without realizing it. That is, they agreed in the mind of a third and unprejudiced observer.

Allow me to illustrate: Both gentlemen have seen the queen making her way about the comb over a path made free by receding workers. One says that the workers get out of the way through respect for their queen; the other says, "Not so; they will do the same for a bee of their own rank." Each gentleman is right, and any one who wishes to investigate will see for himself. Workers make way for their queen sometimes, but not always; workers make way for workers on certain occasions. Why the path is cleared at one time and not at another I have not as yet decided. I suggest that it may depend entirely upon the task which the traveling queen or worker may be about. If not respect for queen, it may still be respect for the welfare of the colony—for bees are socialists.

It is not, however, my purpose to revive the controversy mentioned above. My purpose is to interest my fellow bee-keepers in the means of observing for themselves. Let one see for himself that bees give with folded tongue, but take with extended tongue; that field-bees rarely, *if ever*, put honey into cells, handing it over to younger bees instead; that bees rest, those of different ages having their own special way of taking rest; that young bees do this task, older ones that; that at one time the queen is surrounded by a crowd of solicitous attendants, at another is off in a corner alone with no sign of royalty; that honey is cured inside the bee, being frequently expelled and retaken again; that, in fact, there are a host of facts which will interest the observer for hours.

The making of an observatory hive is not difficult. A man handy with tools can make one in two hours. After the bees are in, it should be set in the window, a hole through a board placed under the sash. Thus set, in a *north* window, it may stay summer and winter. Since there is small space for storing honey it will be necessary to feed frequently. This is best done by setting a tumbler of syrup inverted in a saucer on the window sill outside near the entrance.

I have at present two such hives in a north window. In one is one comb; in the other are ten little cross-combs built to the top-bar and to the glass walls of the hives. I can by means of these two hives get nearly all the doings of the colonies.

These colonies—at least the one with the single comb—are not a source of expense entirely. I have several beautifully straight worker-combs built there through the summer. It takes about ten days to get a full comb built, and two weeks more to replenish the working force before the comb is removed and an empty frame inserted. Possibly the history of such a colony during the past season will interest the readers of the American Bee Journal.

A year ago this observatory-hive colony went into winter quietude with about 3,000 bees and five pounds of honey. It wintered perfectly, taking only two or three flights. There were wrapped about it several thicknesses of paper and denim to shut out the light and to conserve heat. The room in which it was, and is, was occupied by an 8-year-old boy, who is not by any means always quiet. The coverings were often removed that the winter cluster might be observed. By the way, the bees were clustered in only the coldest weather; at other times scattered throughout the hive. During one or two zero spells I placed a small lamp beneath the hive till the weather moderated.

The bees outside had begun to breed some time before this little colony warmed up and the queen started to lay. But when work was once started it was pushed so well that a healthy, if not large, swarm came out May 11th. That swarm is to-day of full strength in a hive which is filled with comb. *It*, itself, swarmed in July, the swarm getting away to the woods. The old colony also swarmed in July, going to the woods. It thus follows that from that small colony three (possibly four) swarms came, and besides that I got three full combs built.

It is of course necessary to add that some 20 pounds of sugar were fed, off and on.

I paused a few minutes just now (it is December 18th, 9:25 in the evening, with a temperature outside of 20 degrees above freezing), to take a look at my two observatory hives. The bees were loosely clustered in spaces 8 or 10 inches across. Several bees were fanning their wings. Small pools of water were on the hive-bottoms. Two or three dead bees were in each hive. One queen was seen huddled in with the workers without any circle of attendants. Bees show no indication that confinement was injuring them as yet, though we have had a long spell of cold weather.

These hives are a source of much interest to my children, to their friends, and every one who sees them. I think that they pay for the trouble they cause, many times over. I strongly advise every one to set such a hive in a *north* window on the second floor. He will get well paid.

New London Co., Conn.

The Making of the Queen-Bee.

From an address by Pastor Kline, delivered before the Wanderversammlung, in Strassburg, and Translated

BY F. GREINER.

In regard to the physiology of the worker and the queen bee I have concluded, after a close observation, that the female bee-larva, when but little developed, embraces within her little body two distinct possibilities or tendencies, viz: 1st, to develop either into a mother-bee, or, 2d, into a nurse or worker bee. One is irresistibly forced to the conviction of its being an error, that the worker-bee is a dwarfed or undeveloped female bee, for in the worker as well as in the queen do we find different organs in the highest state of perfection. The worker is endowed with that wonderful system of glands, the pollen-baskets, the stronger tongue and jaws; the queen with those perfect organs of reproduction.

One and the same egg may produce a worker or it may produce a queen, according to the treatment it receives. When the reproductory organs begin to develop in the larva, the faculties and organs peculiar to the worker remain dormant, and vice versa. There is no possible way to produce a queen-bee with the strong worker tongue, and the fully developed pollen-baskets. When a five-day worker-larva is transferred to a royal cell, from which a royal larva has just been removed, the faculties peculiar to the worker are already in the beginning of their development, and this process is then stayed as quickly as possible, and the resulting insect has the appearance of a queen, but small, and with very small pollen-baskets and short tongue.

In reality we have *not* an animal which combines the qualities of worker and queen as we find it the case with other related insects, as wasps, etc. One would naturally think there would be a distinctly defined line between the two. But we find it not so. The manner in which the embryo larva is fed decides the direction in which the insect is to develop, and, when persistently continued, begins, conducts and completes the development.

When a three-day worker-larva is selected for a queen by the bees, the larva has not yet been fed undigested pollen, and one might expect that at this stage the worker faculties have not yet made a start even in their rudimentary beginnings, but it must be taken in consideration, that on the third day the worker-larva is not as lavishly fed as a queen-larva at this age; also, that before the cell in which the selected worker-larvæ lies can be changed over and built out into a queen-cell, the fourth day will probably have come. A miserable little queen will be the result. We occasionally come across queens which have characteristic marks of the worker plainly visible. In practice, we better steer clear of the idea that a three-day worker-larva is good enough for a queen.

What do we know about a larva developing into a worker in one case, into a queen in the other? It is believed that we must look for a certain admixture in the larval food, or that the latter is more plentifully administered, and thus produces the queen-bee. It appears that as soon as the larval food is changed the development changes with it, but it comes very gradually. I have taken five-day worker-larvæ and transferred them to queen-cells. They should have been sealed after one-half day, but it was accomplished only in a full day, and yet the resulting queen could hardly be distinguished from a worker

The older the larva selected for a queen at the time the change is made, the nearer the resulting queen will be like a worker.

Worker-larvæ, when from 1 to 1½ days old, have hardly received other treatment than queen-larvæ. Not till the end of the second day can we notice that the larval food is more scantily supplied to worker than to queen larvæ. Even when a three-day worker-larva is placed into a queen-cell full of royal food, its growth is slower than that of one that has been in a queen-cell from the beginning, and we can notice some distinguishing marks in the natural insects between those that were reared from one or two day larvæ.

Merely to prove the theory, it might be of interest to know what a queen-larva would do if placed back into a worker-cell, but the latter is not roomy enough for it. From young larvæ taken out of queen-cells I have reared five workers, none of which showed characteristic marks of the queen. The past season I made another experiment in the same line. I transferred thirty ½ to 1 day old worker-larvæ to queen-cells, let them remain therein for two days, and finally returned them to worker-cells. I succeeded only with two. One of the larvæ was immediately sealed after the second transfer and produced a perfect worker-bee; the other one was not sealed quite as quickly, and produced a queen, small and weak, showing a round head and curved hairs on the hind legs, and possessing a short tongue. This experiment shows that the queen-larva can be changed over into a worker.

This may have no practical value except to show by the results obtained, that whatever has been neglected in the earlier stage of bee-life cannot be made good later on by the very best treatment. The moral of the whole is this: "*The earlier a larva receives royal treatment, and therefore the more lavishly she is fed, the better and more perfect will be the resulting queen.*"

COMMENTS BY THE TRANSLATOR.

While I fully endorse the moral, I wish to say this: Our positive knowledge in this mysterious matter is restricted to the fact that the queen-larva is fed more lavishly, and slightly differently during the later period of her life. We do *not* know that this difference in the food and food-supply produces the results we see. I believe the real cause is not understood, and what we see are only the *accompanying circumstances.*

Ontario Co., N. Y.

Convention Proceedings

CHICAGO-NORTHWESTERN.

Report of the Chicago-Northwestern Bee-Keepers' Convention, Held in Chicago, Dec. 2 and 3, 1903.

The convention was called to order by Pres. George W. York, after which Pres. J. Q. Smith, of the Illinois State Bee-Keepers' Association, offered prayer.

Pres. York—I am sure we are all rejoiced this morning to find as many here as we have to begin with. I am sure we shall have a pleasant gathering in this nice, quiet room. The first on the program is introduction of bee-keepers from a distance. After this I wish you would speak to them as you meet them.

Dr. Miller—Is there any law against speaking to any others who are not introduced?

Pres. York—Yes. You must not speak to others at all!

At this point, Mr. Griggs, Mr. Hutchinson and Mr. Binger of Michigan, Mr. Coverdale and Mr. Benton of Iowa, Mr. Whitney and Miss Candler of Wisconsin, and Mr. Niver of New York, were introduced to the convention. After this the annual report of the Secretary-Treasurer was read. On motion, the financial report was referred to an auditing committee.

Blank paper slips having been distributed for questions, they were gathered up, and then discussed. The first subject was:

GRANULATION OF WELL-RIPENED HONEY.

"Will thoroughly-ripened honey granulate?"

Pres. York—Don't all speak at once, because the reporter couldn't take it all down!

Mr. Niver—I would like to ask a question. Is there any honey known that will not granulate?

Mr. Whitney—I asked that question. I have some honey that is uncapped, that I have had three years exposed to the air and it does not granulate. I have it here with me in my room. I think it is thoroughly ripened; it is just like wax, but there is no granulation. I took from my honey-house last spring a number of frames of honey that I had stored away for use among the bees in the spring, 30 or 40 of them, and not one of them that passed through zero weather, granulated. That prompted the question whether thoroughly-ripened honey will granulate. I think that that was thoroughly ripened.

Mr. Niver—To explain my question. I have had a good many calls for honey that will not granulate. I would be very glad to be able to get it. I was told that the Cuban honey did not granulate. I sent there for 500 pounds of it. I was wanting it to supply the patent medicine trade. Their trouble is to get honey that will not granulate, but I found that Cuban honey in our country will granulate as any other honey. If Mr. Whitney has any way to keep it from granulating, or bees that produce honey like that, he struck something good.

Mr. Abbott—The honey made from Mexican Spanish-needles doesn't granulate for me. I have had some for three years and it has never granulated any; but I have never gotten any Spanish-needle honey that did granulate.

Mr. Niver—How are you keeping it?

Mr. Abbott—It is just in the cans. I suppose it is no trade secret. I mix alfalfa with it, half and half, and I can keep honey in the stores the whole season through without granulating.

Pres. York—That's the kind of "adulterating" or mixing that the bee-keeper is permitted to do.

Mr. Abbott—I supposed so, or I wouldn't have told it publicly! I don't know that that is characteristic of all Spanish-needle honey, but I had noticed that, and it never granulated on my hands.

Dr. Miller—To answer that very fully there ought to be some modification, possibly, of the question. The question might arise, What do you mean by thoroughly ripened? Will it granulate? Some would say, and I think very fairly, if it doesn't granulate within a year we say it doesn't granulate, yet it may granulate in two or three years. I want to suggest in the first place that there is no question but what there is honey that doesn't granulate. There are two or three samples right here. There are samples of honey that do not granulate, and I am quite a little of the opinion that almost any honey that you or I have may be made non-granulating, simply by ripening for a very long time. By keeping it warm enough, long enough. Those two things—warm enough, long enough. I saw some samples of comb honey in two places, one in Pennsylvania and one out in this State, that had been kept over the winter in a zero place, that were not granulated and the comb not cracked, and I don't know any reason why it might not have kept for years in that way; and all the secret was, the honey had been kept during the summer season up in one of those hot garrets where you can hardly breathe, and you wish you could get out. If you put your honey in one of these places and let it stay long enough, I am of the opinion it will not granulate, and it will be as Mr. Whitney says, it will be waxy. That will fill your trade, Mr. Niver. That's one of the things all of us need to learn, whether it be extracted or comb, to keep it in a warm place if you have any, or a place warm enough, long enough, and it will be non-granulating.

Mr. Wilcox—Won't you say in an open vessel?

Dr. Miller—You must remember my weakness. I am a comb-honey man. Extracted honey should be open enough to allow the air to penetrate.

Mr. Kanenburg—I had an experience with my own honey. I have an attic where I keep my honey for over winter, in an attic with just shingles on the roof where it is zero almost all of the time. I have had honey there for at least two years. I had a couple of boxes up there in the summer, and in the winter I let them stay right in the attic.

Dr. Miller—How near zero does it get in that attic in the summer?

Mr. Kanenburg—There is no zero there in the summer!

Mr. Wilcox—I have had quite a considerable experience in the line suggested by Dr. Miller, and I have found from repeated trials that it does not granulate if you will evaporate it. It is no longer a syrup, but it gums; but it is impracticable to do that for the market, therefore I cannot see much benefit, and some honey, if placed where it will absorb moisture from the air, will granulate. It isn't in the character of the honey, but simply the care that is taken of it.

Pres. York—What we want is something that will prevent it from granulating in grocery stores. The great difficulty I have found in selling honey in the city is to prevent the granulation in all kinds of temperature. Some of the groceries are warm and some are cold, some don't have fire all night in the winter. What we want is more than a little sample of it. If a honey-bottler had a carload or two he would get a good price for it. What we want is a large quantity that doesn't granulate.

Mr. Whitney—I stated that I took a number of frames from my honey-house that had passed through zero weather, and that didn't granulate. Honey in a shipping-case would keep, it seems to me, from granulating just as well as that comb honey from the honey-house during zero weather, providing it has been thoroughly ripened. I don't know why the grocer cannot keep tons of it unless as Mr. Wilcox says, the weather should be very damp. Of course, it would gather moisture, but in any ordinary dry weather I don't see why they couldn't keep tons of it through zero weather from granulating.

Mr. Hutchinson—It is possible we don't know yet what makes honey granulate. Mr. Boardman claims to have some secret process, at least he doesn't tell what it is, that prevents honey from granulating in the comb. We found that when years ago I was rearing queens, I would unite nuclei in the fall and lots of combs would have unsealed cells, and we would naturally think that that honey wasn't ripened, because it was not sealed. That would be in the very warm weather. In the winter those combs would hang there with the honey in the unsealed cells all winter long and not granulate. There may be some point in the granulation of honey we haven't gotten onto yet.

Mr. Josephson—Why do we want to teach the people to buy liquid honey? I was born in Sweden. In that country we consume a good deal of honey, but can never sell liquid honey. They want granulated, and considered liquid honey unfit to eat. They said it wasn't ripened. We are teaching the people to buy liquid honey here. Why don't we teach them to buy granulated honey, and we get out of all that work?

Pres. York—Perhaps we had better ship our honey to Sweden!

Mr. Starkey—I have had the same difficulty in my experience in handling honey. The fact is, that my trade wants liquid honey, and we find that out when we try to teach them to use something else. My experience is that honey that is once brought to the proper temperature that drives out the moisture, evaporates the water particles, if kept so that water does not again get into it, it will not granulate. But this gentleman's question would conflict with that. Small particles of honey, as in a cell exposed to the air, will not absorb moisture so that it will contain it long enough to cause granulation, but if you want to prevent your liquid honey from granulating after it is once ripened, then it must be kept sealed, or else this bulk of honey will absorb sufficient moisture to again bring about granulation. That is my experience. I believe we can answer the question, the reason his does not granulate, that is, exposed to the moisture, is that the smaller quantity will not contain it sufficiently but will evaporate exposed to the air as it is. But to prevent larger quantities it is necessary to keep it sealed. You can keep it indefinitely if you will bring it to the proper temperature and then seal it in glass.

Pres. York—What is the proper temperature?

Mr. Starkey—I would say from 150 to 160 degrees, if quickly. If a slower process, lower temperature will do it, but it takes longer time; as in Dr. Miller's suggestion, an attic is an ideal place if the honey is left there long enough to ripen thoroughly. Speaking again of the Spanish-needle. In 1879, when I began in Missouri, that was my main honey crop, and I sold hundreds of pounds in the market and in the stores, or anywhere they kept it, and I never knew it to granulate. I kept it in sealed jars. I was selling there two or three years, and I never knew any of the merchants to have any of it candy on their hands.

Mr. Kanenburg—About two or three years ago I had quite a little difficulty with honey granulating on my hands, and so I figured it out that if I got a box and put a glass over it and put it in there and peddled honey, it wouldn't granulate. It succeeded perfectly. Let me state that in the tight box with the glass over it the temperature was 150 degrees. I took the temperature two or three times. I kept that honey two or three years and it never granulated.

Dr. Miller—If you have your honey brought, as you may call it, to that waxy state before it ever granulates at all, then you can get along a good deal better than if you have honey that has granulated. Never allow it to granulate. You say that you can get a sample that will not granulate but a larger quantity is another thing. That's true; but if there's price enough you can get the larger amount. You could have a place arranged—it would take but very little difference in the price of a pound for making a building for it and put a large amount there. It isn't the bringing it to a certain temperature. One hundred degrees is better than 160, and if 160 degrees will do it in a short time the 100 degrees will in a long time. There is something in the long time that counts. We are taking quite a little time on this, but I believe it is important, and I believe there is only one way that we can do a little more than we do do in having it ripened and never allowing it to granulate. And, by the way, I may say to the president, no matter how bad the place that the grocers have, if it is not allowed to granulate, and is so treated that it has got into that waxy condition, that grocer will have to take some special pains to have it granulate if it has first been put up without granulating.

Mr. Abbott—I agree that it is very important, and we are just touching the danger-line. This waxy condition spoken of is very easily gotten by a little carelessness, and if you are not very careful you will spoil the flavor of the honey. There is a plan of ripening honey by a system of steampipes, and I bought some of this honey once. It never granulated, and I don't know but in the start the honey was all right and pure, and of that waxy consistency that nobody wanted it. It wasn't exactly burned, but it was like chewing molasses candy that hadn't been made quite thick enough, and it wasn't desirable honey for the family trade. Every once in a while I have myself permitted a can to get just a little bit harder than it ought to be, and while it wouldn't be burned at all, it would get thick and waxy, and it had to go back to Mr. Somebody, where it was used for candy or printers' rollers. It is a very easy matter to spoil honey while endeavoring to keep it from granulating.

Mr. Whitney—Do you mean spoil by overheating or getting too thick?

Dr. Miller—I don't believe it.

Mr. Abbott—You can't with the sun.

Mr. Moore—There is a train of thought that went through my mind when I heard Mr. Abbott speaking, and I ask him if there is any suspicion of glucose in that.

Mr. Abbott—No, sir.

Dr. Miller—Had a great degree of heat been used in that?

Mr. Abbott—Yes, sir.

Dr. Miller—There's where the trouble is. It is the long and not the high degree of heat that we want. I doubt very much if it ever ought to go above 120.

Mr. Abbott—140 degrees.

Dr. Miller—That may be, but if you keep it at 100 long enough, I won't be much afraid of it.

Mr. Niver—Just one more word on this subject. Mr. Morton, of New York, had a special building for his comb honey; he believed in heating comb honey to ripen it, to make it thick so it would ship better, and he had this special building covered with steel that kept warm, and over night, if it was going to be cool at all, he would heat it. He kept his comb honey in there from four to six weeks. I attribute his success in holding the trade, and nobody could get it away from him, to ripening his comb honey after taking it off the hives. You cannot leave it for the bees to ripen it, for it will get all travel-stained. In New York we have to take it off just as quick as capped, or else it will get travel-stained. By taking it up in this building and keeping it there for a month or six weeks, we got honey we could ship safely. It was very thick, and waxy, and heavy.

Mr. Duby—Do we know the cause of granulation? I believe from my experience that it may be in the method of handling the honey, because I got some of the same quality that had been canned, and some would granulate and others would not, and I noticed in handling it that sometimes there are air-bubbles, and I had an idea that that's what caused the granulation. If we could prevent these air-bubbles, perhaps it would not granulate. That's only a question I am asking.

Pres. York—Do we know the cause of granulation of honey? Don't keep it a secret if you do; we want to know.

REGRANULATION OF RELIQUEFIED HONEY.

"Will honey that has once granulated and then been reliquefied, granulate quicker after that than the first time?"

Dr. Miller—Very much quicker.

Mr. Abbott—That's not my experience in 20 years.

Mr. Duby—Not mine, either.

Mr. Wilcox—If you reliquefy it most thoroughly. Keep it hot a long time, and after you think it is sufficiently melted so that there will be no particles in it, be sure it is all liquefied, and it will be all right.

Dr. Miller—I am very sure that Mr. Wilcox is right. I said yes, it will granulate very much quicker the second time, and I said to Mr. France, "There is one of the things that I am sure I know," and two or three said I was "off," and I found I didn't know after all. I am sure in a good many cases that I have tried it, it granulated very promptly after being liquefied, but it was simply liquefying and not ripening. Now, Mr. Wilcox is speaking about heating it and retaining it at that heat until every particle is dissolved. You simply heat it up enough to melt it, at least in a great many cases that I tried it, to melt quickly and it will granulate ever so much quicker.

Mr. Abbott—I think this is something I know something about because I have been handling it. We sell honey in glass-jars, and our grocery men don't want it when it is granulated. We take it away at once whenever we find any in the stores that's granulated. We re-liquefy by dry heat in the glass, without taking the labels off. There is no more heat than is necessary to liquefy used. It is heated until it is absolutely clear, which we tell by holding up to the light, and when clear there is no more heat applied. After done, it is set in the stores and it will keep liquid four or five times as long as it did the first time when it was put in before granulating at all; and I believe if liquefied that way by dry heat it will keep longer. That has been my experience.

Dr. Miller—Mr. Abbott is bringing in another thing again. He is right, too. You heat honey up to 160, I don't care how quick you do it, get it to that and seal it up, and that will keep a long while without granulating. He has it sealed up and that counts in the case. He is right in that. We have the three different things. We have to sum them up.

Mr. Whitney—Do you loosen the cap of the jar?

Mr. Abbott—No, sir; we use corks. There is a label put on top and nothing is interfered with. It is just left as it is.

Mr. Baldridge—I have had a little experience in handling honey with the family trade. We ought to teach people to use granulated honey. I have been trying to teach my customers for the last three years to use granulated honey. I sell all my honey by sample. I carry granulated and liquid and I give them their choice, and in three years' time I think my customers have selected about four or five orders of granulated honey. I must have a queer class of customers to teach.

Pres. York—You are a poor teacher, perhaps!

Mr. Baldridge—They won't buy it if they have their choice.

Mr. Whitney—I have a few customers who use granulated honey, or rather extracted honey, I should say, and I have placed some of it in the stores at Lake Geneva, Wis.

Pres. York—Granulated extracted honey?

Mr. Whitney—Yes, sir. My best trade in extracted honey want the granulated. They say, "We don't want the liquid honey. Give us the granulated honey."

Pres. York—Are there a lot of Swedes up there? [Laughter.]

Mr. Whitney—Not at all. The very fashionable trade along the Lake, and I ship a good deal here to Chicago, granulated solid. They want it. I have sent it to Kansas City, St. Louis, the slightly granulated.

Pres. York—You haven't sent any to St. Jo, Missouri?

Mr. Whitney—I believe I ought to.

Mr. Niver—Mr. Baldridge and I are working along the same line. I am working here in Chicago putting in granulated honey. I am right in a Swedish neighborhood, and they tell me of that yellow Swedish honey. They say it is the finest honey in the world. It doesn't suit my taste. A good many prefer the granulated honey and I give them their choice.

Pres. York—Mr. Josephson has a sample here, and he asked me what kind it was. I couldn't tell except I called it granulated Spanish-needle honey. It is heather honey.

Mr. Niver—The Swedish people like it granulated, and use it like butter. I have quite a percentage of families that take it that way from choice.

Dr. Miller—While this is here, let me mention one point in which it differs from any honey we have in this country. I am not sure about Sweden. In some places the heather honey cannot be extracted.

Mr. Josephson—They can extract it, but the reason is that they are very backward in bee-keeping. It can be extracted if it is done about three or four weeks after being gathered, but if it stays in the cold it granulates right in the hive, and it stays granulated if kept until the next year. By this you can see whether they had honey the year before. It will never go back to the liquid form.

Dr. Miller—I understand the honey was always in that shape even before extracted. The only way to get it out is to press it.

Mr. Josephson—They smash up the combs, and put it in a strainer, then keep the honey three, four or five weeks in a room where it is warm.

FALL ITALIANIZING OF BEES.

"Who thinks the fall a good time to Italianize a colony of bees?"

Pres. York—How many think so? Raise hands. Eight.

Mr. Smith—My experience is that you usually have young, vigorous bees for the spring work by Italianizing in the fall. That has been my experience. You have better results.

Mr. Hutchinson—Mr. Smith has just about told it. You have young, vigorous bees, and you will have more young bees to go into winter with. That queen is right in her prime, and that queen will build up quicker. You can get queens cheaper then; they are easier reared in the best of the season. I prefer to Italianize in the fall.

Mr. Wilcox—How late in the fall in this State?

Mr. Hutchinson—I wouldn't want to wait too late to rear the queen. I wouldn't care if it was in October, but I wouldn't want to rear a queen that late.

Mr. Baldridge—It is a good time to Italianize in the fall or any other time.

Mr. Whitney—I didn't raise my hand, as Pres. York didn't put the question on the other side, but my experience has not been very flattering. I would think it might be a good time to re-queen in the fall, provided you had a queenless colony and would be likely to lose them if you didn't re-queen. Late in the season I got a couple of valuable queens and I undertook to introduce them and they came pretty nearly setting my whole yard wild trying to rob each other, and they fought the colony of bees so frightfully that they actually destroyed it. The colony killed their queen, 2 or 3 days after introducing, as they were so disturbed. I had almost a similar experience trying another. It is the first experience I ever had introducing queens in the fall, and it seems to me that if they are introduced in the spring during flight-time, or after that, she would be during her prime and would have a good colony of bees to go into winter quarters with. It seems to me to be a much better plan. I have a clipping here which says the fall is the best time to introduce bees. I don't think so. That's what my experience taught me. Perhaps I don't do it right. My experience was very unfavorable.

Dr. Miller—I raised my hand because I think the fall is a good time. I doubt whether it is the best time. I doubt whether I ever introduced a queen in the fall, but if I had a queenless colony in the fall, I would think the fall was the best time to introduce the queen rather than to hold that colony queenless until spring. Whatever may be the disadvantages, there is this one advantage in introducing the queen in the fall, that you don't interfere at all with the honey crop as you may do by introducing a queen early in the season.

Mr. Abbott—The man that interferes with the honey crop in introducing a queen doesn't know how to introduce a queen.

Pres. York—Don't know when?

Mr. Abbott—Don't know how. Let me tell you how to introduce a queen so it won't interfere with any honey crop. The bee-papers have never found this out, and the people who write bee-books.

Dr. Miller—I thought I told them you said so!

Mr. Abbott—Put the queen on the hive and pay no attention to the queen that is in there. After she is in there let her lay all she can, and all she will, and when you get one in, pinch the other queen's head off and turn that loose and go on about your business. You can get five or six on top of the hive, as many as you want, and let all six out. There isn't any use of this fool nonsense, telling people to make their bees queenless. It is like hundreds of other things. It has been in bee-papers and agricultural papers until nearly everybody thinks it is absolutely the way to do this, and you can't do it any other way, and if a man once in a while tells a different way, they will ridicule him and go on doing the same thing. I would like to see Dr. Miller get up and say that this nonsense stop, and we quit making colonies queenless a minute. That is, if we want to get use of the queen. I should like to know what you mean. The best time for what, or for whom? Do you mean the best time for the fellow who has the queens to sell, or the best time for the colony of bees, or the best time for the man's pocketbook? If you mean the best time for the man who has them to sell, why then that's a good time. He wants to get rid of them and he would like to have some fellow think that that was the time to buy them. If you mean the best time for the colony of bees, then it would have to be a queenless colony; and if you mean the best time for the man who is investing the money, I would say, don't do it. If you mean the best for success—now you may buy one for $5.00 in the spring, you may buy one for $2.00 or for $1.00, but if you pay $1.00 for a queen in the fall, and buy five queens for five colonies and you lose them, then you are out your $5.00 which you might just as well have had in your own pocket as in the other man's pocket; but of course he didn't think so because he had queens to sell. A great deal of this is gotten up like the patent medicine man, all sorts of diseases, and you must think you have some of them. You can diagnose your own case, and his medicine cures it, and you buy his stuff.

Mr. Starkey—Let me tell you the best way to introduce a queen. I agree that Mr. Abbott's plan is all right, but I want to give you an improvement on it. [Laughter.] His way would be to open the hive and put the queen on top. Put the queen on the inside of the cover.

Mr. Abbott—Any place about the hive where the bees can get at her.

Mr. Starkey—I would only open the hive once. He will open it twice. I have to open the hive only once because I put the queen in the box that she shall remain in until the bees take her out by eating the honey or candy between. I introduce her in this manner. Now, of course, lots of men introduce queens that way, but that way will work. Now, in regard to the best time, we will have to say for what purpose. If a man wants to change a colony of bees, kill the old queen and introduce a better one, the fall of the year is a good time. Mr. York knows whether or not I have been buying them, because he sold them to me. I am not speaking for Mr. York, or any other man, but bees certainly do introduce nicely in the fall. As to robbing, they will rob whenever you examine them, if you happen to get robbers at them. If I have had any time to introduce after the harvest was on, I don't remember it. I have introduced several since. I believe the fall is the better; you can get the queens cheaper, and you can get them more promptly, because the bee-men have them on hand. That is the great difference over the spring-time, but you have to carry her over the winter. If you count on losing your bees, I say, don't introduce them. If you wait until spring when the queen is once laying, there is just as much chance of robbing, and I believe it is better to do it in the fall. Then another advantage, you have got no brood to lose when you open the hive to find your queen.

Mr. Abbott—Let me make that a little clearer. Now, what I mean, I won't open the hive but once. I sometimes have four or five queens. I sell queens, to illustrate. There are four or five that I want to get. I take these cages and put them on top of the frames under a cloth and turn them down so that the bees can get at them. May be I want to introduce one of these to that colony. After they have been on the hive 48 hours I take any one of the five or six I had on there. I first hunt out the old queen and kill her, and make it so the bees can get at the candy. I want them to do it in about an hour, and if I don't think they will do it in an hour, I make a hole so I think they can eat it in an hour, and I go on about my business, and I have never lost a queen by that process.

Mr. Whitney—I have no doubt it is a good way to introduce a queen, but we seem to digress from the subject. The question is not how to introduce a queen, but what is the best time. I read in Gleanings, "I think you can easily Italianize your bees in the fall; in fact, that is the best season of the whole year in which to do it." Now, I haven't listened to any argument here yet that has satisfied me that it is. It may be the experience of others, possibly, but, in our locality, we haven't had good success in introducing the queen in the fall. It was almost impossible to keep the bees from robbing the colony after you open it in a certain season. I thought I could manipulate a colony of bees and do almost anything I wanted to with them, but I came pretty nearly being beaten trying to introduce a queen in the fall, and I never had any trouble introducing a queen during the summer-time; I have never had any successful robbing during all my experience of seven or eight years, until this fall.

Dr. Miller—I want just to refer to that point. With Mr. Abbott's plan he saves 48 hours of the queen's laying because he puts the caged queen in there, and leaves her there with the old queen, and he saves that 48 hours' laying. Now, don't settle down right away to that. When he takes away the old queen and liberates that queen, that queen doesn't commence laying right away, and the interference is more than two full days, because if the queen does as they do with me, they will sometimes be several days before they begin to lay, and when they do they begin on a small scale, and he saves that, too, and that makes his plan that much better; and after all there isn't so very much difference, and you cannot put in a new queen and have the laying go on without any loss. Set that down.

The convention then adjourned to meet at 1:30 p. m.

FIRST DAY—Afternoon Session.

After Pres. York called the meeting to order, the auditing committee made its report thus, which was duly approved, and the committee discharged:

Dr. Miller—Mr. President, your committee has the honor to report that we have examined the treasurer's books and found them correct.

Pres. York—I see on the program that the first thing after dinner is the President's Address. It is a good thing it didn't come before dinner. We probably all feel better about it now, and can stand it.

PRESIDENT'S ANNUAL ADDRESS.

Another year of bee-keeping experience has rolled around since last we met. To many of the bee-keepers of the central portion of our country it was a year of abundance of swarms and of honey. To some it brought the largest crop of honey they had ever had. Consequently to-day *they* wear a broad smile in addition to their good clothes.

Perhaps on account of the unusual crop, it seems the price of honey has weakened a little lately. But this ought not so to be. There is never enough honey produced to supply all who would eat it if they only knew its true value as a food. The fact is, a lot of people do not know that their health would be better—their life pleasanter and sweeter—if they would add to their regular daily "bill of fare" the honey that bee-keepers produce and offer for sale. Some day I hope to see honey advertised in the daily newspapers, along with Uneeda Biscuit, breakfast foods, etc. When the people once realize what a healthful food honey is, there will be no further trouble about keeping up the price to where it ought to be.

THE ILLINOIS BEE-KEEPERS' LAW.

Since our last meeting, the committee then provided, in conjunction with the State Association, has secured an appropriation for bee-keeping in Illinois, amounting to $2,000 for a period of two years. Already an inspector of apiaries, Mr. J. Q. Smith, and a deputy inspector, Mr. Herman F. Moore, have been appointed under the law. Another spring they can be called upon, and will do what they can to help put an end to bee-diseases in this State.

While this law applies only to Illinois, all bee-keepers are interested in it, regardless of what State they may live in; for every State added to the list of States having laws in the interest of bee-keeping makes it just so much easier for the States without such laws to secure them.

CO-OPERATION AMONG BEE-KEEPERS.

This is a subject that received considerable attention at the Los Angeles convention of the National last August. Something has been done about it in a few of the Western States, but it seems that not much effort has been made to get the bee-keepers of the Central and Eastern States together for their own benefit. Ours is a large country. If you doubt it, just make the trip to California even from Chicago (including a walk down and up the Grand Canyon), and I think you will agree that we have a big country. There is no question in my mind, but that bee-keepers should form commercial organizations, for the control of the marketing of their product. But *how* can it be done? It is very easy to say a thing *ought* to be so and so, but it is quite a different matter *to make* it so and so—or, in other words, *to do it.*

I haven't the least doubt that properly organized and conducted, honey exchanges would be most excellent things for the producers. It would also help the consumers to have confidence in honey, when they could be assured that all "Exchange" honey is absolutely pure, because bearing the "Exchange" label or brand. There are great possibilities along these lines, I feel assured, but I am not wise enough, or sufficiently experienced, to *lead* the way to success. However, I am interested enough to be willing to do what little I can to help stir up the subject until such time as it shall result in something tangible and really of value to bee-keepers.

For nearly a half century bee-books, bee-papers, and bee-keepers' conventions, have been devoted to the teaching of bee-keeping and honey-production—to hives and apiarian paraphernalia and their manipulation. It seems to me that it is high time that bee-keepers begin to pay more attention to the *other* side of their calling—to the selling side—to the disposition of their honey product. The most of them know how to get the honey. The next thing is to turn it into more money than the most of them have been getting for it in recent years.

But I must not longer occupy the time of the convention. We are here to discuss matters of deep interest to all. You all have questions that you wish to ask, and all wish not only to have their own questions answered, but may want to answer the other fellow's questions. That is what we are here for. That we may have the best and most profitable meeting ever held by bee-keepers in this great, overgrown city, is my earnest wish; and that all may return to their homes feeling that it has indeed been good for them to be here, is my fondest hope at this time.

George W. York.

Mr. Abbott—Is the President's Address open to discussion? I don't want to discuss it. I want to offer a protest. I don't think it is fair for The American Bee Journal to advertise Uneeda Biscuit and not get paid for it. I move that be expunged.

Dr. Miller—How do you know that he isn't paid for it?

Mr. Abbott—I know from the look on his face.

Mr. Wilcox—As long as they buy our honey we will advertise their biscuit.

PREVENTING HONEY LEAKING FROM GLASS JARS.

"How do you keep honey from passing out from under the rubber of a sealed glass jar, creeping out as it were?"

Pres. York—I use glass-top jars, and the honey doesn't leak out from under the rubber ring under the glass.

Mr. Moore—My brother has put up honey for the retail grocery trade for six or seven years. He has always used one package, and that is the jelly glass holding, I believe, eight ounces of honey. It is put up like the historical Muth jar. It has flat sides to make it look larger, and is creased here and there, eight creases all the way around so it makes it look really fine, and looks is considerable. That trouble of the honey getting out of the jars is one that has always troubled the people who put honey in jelly glasses. I used to blackguard the other fellow by saying that they never could get good honey in a jelly glass. My brother has a steel stamp. It cuts out pieces of paper just the right size so that when he puts the tin cover down, it makes it air-tight—not air-tight, but honey-tight.

Mr. Reynolds—That must be something like they are using on the milk-bottles.

Mr. France—Have you tried that with a mason fruit-jar, putting a paper underneath?

Mr. Moore—No, sir.

Dr. Miller—The milk-dealers have a piece of heavy manilla paper cut with a stamp that makes a tight fit, and they put that down in the glass bottle, and it stays there. You can turn it upside down and it stays there.

Pres. York—You can do that with honey, with the ordinary jars that are used for honey—the screw-top jar with a rubber band.

Mr. Starkey—Should the honey-jar be so full as to have the manilla paper touch the honey?

Dr. Miller—I don't think it is absolutely necessary to touch it.

Mr. Reynolds—Yes, sir.

Mr. Smith—I have sold a good deal of honey in jars, but I have never had any leakage. I don't use rubbers. I use a jar like the cylinder preserve jar, which has a screw top, and on top of that it has a thick paper cut just to fit the lid, and when you screw that down it lets the air pass but the honey never leaks. You can turn it upside down. I have had the best results with that jar.

Pres. York—I have had the same jar, but the consumers couldn't get it open half the time. They would return it to the grocer because they couldn't open it.

Mr. Moore—This question of packages for honey is one that I have observed considerable. I will have to condemn the Mason jar first, last, and all the time. It is the cheapest, most worthless jar that is made at the present day. My own choice is the Lightning jar with that pry-over beer-bottle snap. I believe you all know what it is.

Pres. York—No, we don't all know. [Laughter.]

Mr. Moore—It is the only jar that is worthy of attention. It has a lever fastening.

Mr. France—We are not all familiar with beer-bottles!

Mr. Moore—Honey that gets air, if it has a chance to do so will expand. If you fill a jar honestly full, it will come out, every time. The only objection to the Lightning jar, which is the only first-class jar on the market to-day, is its expense. Any jar that has a leverage fastening, or a strong steel bar, ought to fill the bill. The jar Mr. Smith speaks of, I am not familiar with. He ought to put the Association in communication with these people. If the thread of these jars is good—the Mason jar is not good enough, it is too short.

Mr. Smith—Mr. York says he can't unscrew it. If you will just pour a little hot water on the top, you won't have any trouble unscrewing it.

Pres. York—We almost gave away the last lot on that account.

Mr. Abbott—It seems to me nobody has touched the reason why the Mason jar leaks. We use some, also another jar, a round, glass one, and the glass lid fits far down on top on a rump, and then a wire around the top and the sloping hill on each side would come under, and that jar never leaks honey. There is no chance for the honey to get up over. The Mason jar with top screwed on, there is a space between the jar and the lid, and it never leaks until somebody turns it upside down. You can fill it full and it will sit there on the shelves for weeks and not leak; but as soon as somebody comes in and turns it up, there is that little honey up behind, it will always stick there. It is the same way about the milk. If you don't turn the jar, the Mason jar would never leak. Our jars do not.

Pres. York—I think there is a jar that won't leak.

Mr. Abbott—The two-pound Muth jar.

Mr. Moore—I spent weeks traveling through Indiana a year ago on this matter of selling honey, and I sold honey in these jars that Mr. York handled, and the Roots are now selling and using—the Tip-Top. For a ¾-pound jar it is absolutely the best. I am not plugging for Mr. York nor for Mr. Root. It is absolutely a first-class jar to put honey in to-day. Mr. Meredith puts horseradish in them. In my travels I found these same jars used for everything—horseradish, jams, etc.—all over, and not a single grocer had a complaint to make of it.

Mr. Meredith—Is that the jar referred to there, having the spring top?

Pres. York—This is not the one. It is a different jar.

Mr. Meredith—The one I put horseradish in I find a very serviceable jar for both horseradish and honey. Horseradish is put up cold, but where honey is put up warm, I think often the contraction will form a vacuum that has a great tendency, so much so of course, that with the rim removed, it would be still tight.

Pres. York—The question is: How do you keep honey from passing out from under the rubber of a sealed glass jar, creeping out, as it were? I suppose the best answer is, Don't use that kind of a jar.

Mr. France—I agree there, but, in case you do, take heavy manilla paper and put on top first. I tried that to get rid of some of them. I use them because after the fruit-season the grocers have a lot that I can get at a discount. Put a heavy manilla paper on top of the Mason jar before putting on the cover.

Mr. Clarke—I don't see why honey cannot be put up in a Mason jar just the same as fruit can. Now, we know that if there is any leakage with fruit, the fruit is spoiled. Why is it that our best housekeepers use the Mason, or Ball, or some of these jars? Merely a question of air-leakage which probably gets to the honey. With fruit it is spoiled if there is any leakage, so I don't see why we couldn't put up honey just the same way as fruit.

Mr. France—I submit that Mr. Abbott hit the point there. If it is carefully carried and put right side up it will be all right, but our honey is tipped upside down. If honey were carefully handled it would be all right.

Mr. Clarke—I think entirely different from Mr. France. I know it is the law of the ladies that are successful with putting up fruit (I have done a good deal of it myself) that it is invariably turned upside down. The next day, if there is the slightest particle comes out, the bottle is put to one side, but not one in 50 will leak, and there is no possible means of the hot fruit creeping.

Mr. Abbott—Mr. Clarke seems to ignore one fact. You create a vacuum and you get the weight of external air equal to tons. It is hot, and when it cools it leaves a vacuum as they bear down on that lid with force. When you put the honey in there is no air pressure at all.

Mr. Clarke—You are mistaken entirely about that. In screwing down it makes the vacuum on top of the liquid, you turn it upside down and the liquid goes to the bottom, therefore the pressure must be on the liquid underneath and therefore it would come out from underneath the stopper.

Mrs. Stow—I think Mr. Abbott is correct.

Mr. Abbott—The idea of the vaccuum is correct. Turning the can upside down doesn't make any difference.

Dr. Miller—I would like to ask a practical question as to what Mr. France said—whether that piece of manilla paper put on the top is to go down inside of the jar or over the top of the glass?

Mr. France—The way I have done, it sets down in, and the edges turn up a little.

Dr. Miller—That's coming right back to the milk-bottle arrangement again.

Mr. Kanenburg—The Mason jars are not made like the milk-bottles, they are wider down below than on the top. How can you put a piece of paper in there to make it flush with the jar? You cannot get it tight enough then.

Mr. France—I said there was a portion of them that leaked. I condemn the package, but it is a great help to use the paper flange, and then when we let go, the expansion brings it back.

Mr. Whitney—If a piece of paper thick enough is put under the cover of the jar, and pressed down onto it, and that piece of paper fits on the top of the jar, and you screw your cap down, it won't leak. It won't leak even with the piece of paper right on top of the jar.

Mr. Meredith—I think that the expansion of honey, or any other liquid that is contained in a jar, if put up under ordinary temperature, will have a tendency to raise the top of the jar as a safety-valve might.

Mr. Wilcox—I would like to know if it is really admitted here that a Mason jar will leak honey with a cap put on between the jar and the top. I have not had as much experience as some, but I never had any leakage until I opened it the second time. When I screw it back I suck that out, and I have always taken it for granted that I took the honey out, and not that it leaked out if I left it sealed.

Mr. Johnson—I have had experience with Mason jars and others. I concluded that the Mason fruit-jar is my future package for extracted honey. I always use a new rubber and screw it down real tight, and they never leak. I suppose a Mason jar wouldn't be used for shipping very much anyway, but for a package to sell around home, I believe it is the best package that you can get, and you can get it cheap. Of course, the smaller the package the smaller the margin for selling them, because after you pay for the package you haven't much left. I sell my honey for a dollar a gallon, and ten cents for the package, or they can bring the package back and the money will be returned.

Pres. York—It seems to me a dollar a gallon is pretty cheap for retailing honey.

Mr. Chase—I asked that question, and I feel quite satisfied with what has been said on the matter, especially what Mr. Abbott said in regard to the pressure caused by heat. I put my honey up exclusively in Mason jars, and when placed upon the market I find considerable trouble. It seems to creep out over the top and spoils the labels. I didn't know but what it would be possible that something could be applied to keep it from creeping over. I think it is the space between the cover and the jar that allows the honey to come through.

Mr. Thompson—I agree with Mr. Wilcox on that subject, if put up rightly in the Mason jar it won't leak, and I have that confidence in the Mason jar that I would replace all packages that leak free of charge.

THE HONEY CROP OF 1903.

Pres. York—How many had an unusually good crop the past season? Raise your hands. Fifteen.

Pres. York—How many about an average crop? Raise your hands. Thirteen.

Pres. York—How many less than an average crop? Raise your hands. Five.

Mr. Hogge—There is a gentleman sitting next to me—a new man in the business. He says he started out with two colonies, and had 500 pounds of honey and 8 colonies increase. He didn't hold up his hand.

Rev. McCain—This is my first season, so I cannot say whether it was comparatively good or not.

Mr. Whitney—Pres. York asked for an average crop. Now perhaps an average crop for some people would be better than an extra good crop for somebody else.

Pres. York—I had to ask the questions as they were written, you see.

Dr. Miller—I think that has nothing really to do with the case. The question is, What has been the season, no matter whether I am in a good or bad locality? Has it been unusually good, or bad, or has it been an average season? I think there has been quite a little light thrown on the subject by these answers. I think it is a remarkably good year everywhere. The fact is that one man will have a good crop and do such a lot of crowing over it that everybody thinks they have it. It is nothing more than an ordinary year, taking all the answers that are given—fifteen, thirteen and five. The fact comes out that there are quite a number here who have not had as good a year as usual.

Pres. York—I will ask Secretary Moore to bring forward Mr. Huber H. Root, who is to speak to us on Wax-Presses this afternoon. He is the youngest son of A. I. Root, whom we all know so well. Last year we had Mr. Root on the program and I promised him if we lived we would hear from him this year, as last year in some way his address was overlooked. I was very sorry indeed, and so offer this apology.

Dr. Miller—Before you give him another chance, and before we are through with this Root business, I want to say that there is another member of the family, Mr. Ernest Root, who was scheduled to be here, and I know that he expected and desired very much to be here, but he felt it his duty to attend the Ohio State meeting. They are trying to get a foul brood law there. He is very soon thereafter to attend a meeting in Washington, making it really impracticable for him to be here. As his name was publicly mentioned, I thought it best to make this explanation. I beg pardon for taking your time.

WAX-PRESSES AND WAX-RENDERING.

I will tell you how that was last year at the convention. Mr. York was so interested and delighted, and I was so interested that I forgot all about it until I got home and the first thing I remembered about it was his writing a letter to me which made me feel badly. I felt badly because he seemed to feel so badly. I hadn't felt badly, because I was so delighted with what I had heard.

As I look around here to-day, there is Mr. Hutchinson and Dr. Miller, and others that I am aching to hear from, that can speak from years of experience, and it occurred to me that this subject of wax was rather common-place, that it didn't amount to very much, but I believe it does amount to more than we would ordinarily think.

Down in Cuba there are a lot of men keeping bees for the wax only. They spill the honey—use it to wash with, I suppose—but here a good many don't care anything about the wax we get; we are all after the honey. Some of us go after the wax, but we don't get it all. I don't know that it would be very hard to give an estimate as to how much wax is wasted in a sun wax-extractor. There is so much left in the old combs that cannot be gotten out. I am very well aware of the fact that many don't use the sun extractor, but most people use the method that I will designate as the cold-pressure method. I mean they heat the old comb in some other place and then press it in a press, and they don't surround that mass of wax and old comb with any heat during the time of the pressing.

About a year ago I spent considerable time working on this very question. My brother was anxious to see, if he could, which was the best method to use, steam, hot water, or this cold-pressure method, and also to determine which was better, a lever or a screw, and I was very much interested in these experiments that I conducted myself at that time.

I don't intend to make this an advertisement for the German wax-press. In fact, I shall not speak of that. I will describe the method that I used, in which I got more wax by considerable extent than I did by pressing under a screw and applying no heat at the time of the pressure. I found that I couldn't get anywhere near as much wax by pressing on wax without the heat at the time, and it seemed to me that this was the reason: The wax as it is being pressed, oozes out. It oozes out and comes in contact with a little cocoon, little piece of the debris. It is chilled. I reason in this way, that if there was some heat to carry that on out we could get so much more wax. That is a theory. Now I will try to show that this theory is a good theory.

I found that I could get—of course the amount of wax varies greatly that could be gotten from the comb. We had 8 or 10 barrels of old comb that had been accumulating around there for a year or so. With that old comb I found that with the hot water method I could get about 18 ounces of pure wax out of five pounds of the old comb. Using the same old comb and pressing without heat, that is, having heated the old comb in some other place, I found that I could get only about 10 to 12 ounces. That would seem to show that there was something lacking in that method. Well, I thought then that perhaps I didn't do it right some way or other, so I had some samples sent in from men who used that method of pressing out the old comb, having heated it some place else with a little water, perhaps. A man sent in a sample, and said that it was from cappings, and he defied me to find any wax in it. By the hot-water method I found that it contained 25 per cent of pure wax. It astonished me. I didn't expect to find anywhere near that much. I don't suppose that there would be that much, ordinarily, but I think that that experiment proves that not anywhere near all the wax is obtained by that method of pressing, without any heat at the time of pressing.

Now I will describe the hot-water method that I used. I had an ordinary oil-barrel, I think. I cut it off so that it made a tub about one foot high, and then nailed ribs down through that about ¾ of an inch square. I made a frame of oak, 2x4, to surround that tub—one piece underneath, one piece on top, and two side-sticks, and to connect those we got heavy cleats. Then I had an ordinary carpenter's bench-vice. I was careful to take only such material as could be obtained at any hardware store in any town. This screw was three or four threads to the inch. I took the nut and placed it on the under side of the cross-stick, and there I had my wax-press.

The method I used was slow. I wrapped up about five pounds of the old comb in burlap; made a nice package of it that would just sit down in the bottom of the tub. Then I took a pail of boiling water and poured over it, and let it stand for perhaps a minute, and then applied the screw. I guess I left out the plunger under the screw. It was a hard wood piece sawed to fit the tub. After applying the screw on this amount of wax the wax immediately flowed on top. I could tell right away that I was getting a lot of wax. I turned the screw down with all my might, and then raised it, and with a stick pawed over the contents, and then applied the screw and found more wax, and the third time I found a little more wax, but the fourth time I didn't get enough to say so, so I applied the pressure about three times, and in this manner I obtained an average of 18 ounces; once I think it was as high as 24; again, down to 15, but it averaged about 18 ounces out of five pounds.

There was quite a little discussion at the time as to which would be better, a large 12-foot lever or this screw, and I tried both of them. It is a mathematical fact that there is more mechanical advantage with the pressure that can be exercised with one arm on the pressure of a screw than a man's weight on the foot of a lever. It is not only a mechanical fact, but a fact that I proved by experiment, but I don't know whether the pressure is what I want. I don't believe we want a lot of pressure. It was the pressing, and giving reasonable heat while pressing, and then raising up and pressing again, under the continued hot-water heat, and so I found that I could get just as good results with the lever as I could with the screw, but I had to employ a man to help me—a good heavy man to sit on that lever while I was at the other end, whereas with the screw I just used one arm. And then with the lever I had to have a good, strong post at the end, for the end of the lever, as a fulcrum. There is a tremendous pressure on the floor. Of course the screw and the strain is all on the frame. So I found that although I could get as much wax with the lever it was a lot more trouble. It took about the same length of time, and I had to have somebody to help me, and then continually during the work the lever would slip off and bother me. I don't believe a lever is as good as a screw. It is too much trouble.

Then there is this question: How are you going to get that wax off of the top of that hot water? You can't dip it off; stand there and dip it off a spoonful at a time, it would take you forever. Just simply pour it out into another pail somewhere, and let it stand in it for half an hour, and you can take the cake of wax right off. It takes four or five pailfuls to keep going. It seems like a very mussy method, but it gets the wax. There are a good many who argue that they would rather get a little less wax and do the work quicker, but am I not right in saying that when a bee-keeper is rendering wax it is at a time when his time is not very valuable, and he can afford to take a little more time in order to get all that wax? I am sure that if any of you will try the two methods side by side, giving them a fair trial, you will be surprised at the amount of wax that can be gotten from the pressing with continued heat.

Now I would like to hear from some of the rest of you who can talk on subjects they have been working at for 40 years.

Mr. Wilcox—Mr. Root, would you melt that in another vessel and pour it into the wax-press and press it, or set the press on the stove and heat the water there? Which would be the better?

Mr. Root—It was a wooden tub. I should use the steam, and let the steam come right up in. I neglected to say that in my experiments with both steam and hot water it was the same—you get just as much wax one way as the other. The hot water took a little longer, but steam is so much nicer to work with, the wax is in nicer shape, and you don't have to pour it out and cool it, so that I prefer the steam, although steam could not very well be employed in a home-made wax-press.

Mr. Meredith—What about the amount of wax that we obtain from a solar extractor as compared to 18 ounces you got from five pounds?

Mr. Root—I really cannot answer that question, as to how much can be obtained from a given amount of wax in the solar, as to the hot-water method. I don't know. Of course we had two or three solar extractors running all the time, but I wasn't home long enough to work that out, but some time I intend to put five younds of wax in the solar and give it a good trial, and see just how much wax we obtain; but I know I obtained lots of wax from the refuse of the solar, but of that I didn't keep any data, and I wouldn't even assume to state the amount.

Dr. Miller—In using the lever as compared with the screw, the lever exerts a continuous pressure and the screw you screw down and it stands right there, and it doesn't follow on down. Don't you think there is an advantage in that continuous pressure on the lever?

Mr. Root—I cannot see that. As I applied the screw I kept my hand turning right around, and just as soon as I got it down I turned it up and pawed up the contents. The screw was continuous pressure because I kept it going all the time. The lever went down a good deal quicker, but I could not see any advantage or difference whether it went down quickly or slowly.

Dr. Miller—In actual practice you wouldn't expect some one to be there all the time.

Mr. Root—I was at it to keep it turned down all the time until I put it up and pawed it over.

Dr. Miller—You can't work for me! [Laughter.]

Mr. Moore—Would it be a good idea to work a solar extractor and the steam wax-press together, in order to work over the material that comes from the solar?

Mr. Root—I think that would be a very good plan. The wax that comes from the solar is such a good quality—nice, clear and clean.

Mr. Moore—Would you think it more economical to do the entire work with the steam-press?

Mr. Root—That's a pretty big question. The solar wax-extractor is handy to have around to throw wax into.

Mr. Wilcox—With the solar wax-extractor you save nearly every ounce of honey.

Mr. Root—That's true.

Mr. Wilcox—I would use the solar, anyway.

Mr. Root—I think it is economical to use the solar in connection with the others, but I wouldn't depend on that entirely, because I don't think that it gets more than half the wax out.

Mr. Moore—Do you consider the German wax-press embodies all the best principles that are known to-day as carried out by your experiments?

Mr. Root—You put me in a rather embarrassing position.

Mr. Moore—You are simply an expert. Tell us what you think.

Mr. Root—I got just as good results with the steam-press and the hot-water press. I couldn't find any advantage in the actual result one over the other, but the hot water took a great deal more time than the other and was mussy.

Mr. Starkey—Did you find that you got all the wax by either process?

Mr. Root—No. I found that if I kept on I could continually get a very, very little, but it was so little that I didn't think it paid to fuss with it any more. I suppose that if there was some method used whereby that refuse (I call it cheese), could be scraped up as in a cider-press, I think you could get a little more wax out of it, but I don't think it is worth the trouble.

Mr. France—I have had considerable experience, and in fact the first day I used the German wax-press I rendered out 2,000 combs. You speak about turning the screw down, and then up, and then down again. Now, didn't you turn the screw down until the wax oozed out, and then you turned it up and pawed it over, and the oozing out of the wax permitted you to turn it down lower?

Mr. Root—I forgot to mention that. I turned the screw down only as the wax oozed out and let me turn it down. There is no use exerting a lot of strength. Turn it down gradually, and then you can move it and turn it down a little lower.

Dr. Miller—That's right. (I may hire you after all!) There must be time allowed for that wax to work out. It is not going to go on a jump. When you squeeze it down tight it must have time to work out. Here is a practical question: Suppose that I am at work at something, and I come and screw that down, and I have it standing on the stove. I don't want to stand there screwing all the time. I want to leave for five or ten minutes. I would like to have a way that there would be a constant pressure. I want to know if there is any law against having a spring there? If there were a heavy spring and you screwed it down, that spring is making a constant pressure there until you come back again. What would be the objection to that? Cost?

Mr. Root—Cost is one thing, but I don't believe you would get any more wax that way, and I think you would have to be around there just about as much. That is, that operation of pressing is short. It didn't take me over five minutes to get it pressed after I got it ready, and it was my experience that it is better to do one thing well than to try and do two things and do neither well. But perhaps it is a good plan to let it stand. Did you find any advantage in that, Mr. France?

Mr. France—No. I melted it in another package. I had the press on the stove and kept it hot, and as fast as two iron kettles would melt it, I pressed it. We ran four wagon-loads of combs through the press that day.

Mr. Root—You heated it in another receptacle and then put it in the wax-press?

Mr. France—Yes.

Mr. Root—It is a question how much it will pay you. If you are working for time you had better do that way, but if you are working for wax you had better have the steam generating while pressing.

Mr. Moore—Mr. Root, you are a civil engineer. It is an ordinary lever used to turn the screw. Now in the presence of that tremendous force, would you add to it at all with a spring?

Dr. Miller—You can't add to it.

Mr. Root—It would make a very complicated apparatus. It would be so complicated and bulky that it wouldn't pay. The pressure you would derive from the use of the spring would be so—

Mr. Moore—Infinitesimal, wouldn't it?

Mr. Root—Yes, sir.

Mr. Moore—It would be zero, wouldn't it?

Mr. Root—It would require a very strong spring.

Dr. Miller—I protest against that. The screw here brings it down to a certain point. Within a very short time there is no pressure there. Now, if you had a spring there—for instance, you have a spring that stands eight inches. Now let that stand there alone, and the sinking away of this mass will allow that to come down to ten inches. Of course there is a constant pressure. Don't understand me for a minute to say that that spring will add a quarter of a grain to the force. It can't possibly do it.

Mr. Root—You mean the spring will act after the screw has ceased to act?

Dr. Miller—That's the point. It is a matter of time.

Mr. Root—Why not turn the screw down a little more? Is your time so valuable?

Dr. Miller—Just so. When I hire you I won't mind so much!

Mr. Root—It takes so little time, the whole operation, that I fail to see the advantage of the spring.

Mr. Whitney—I simply want to ask the Doctor if he wants to hire Mr. Root?

Dr. Miller—Yes, I am getting him trained!

Mr. Root—I would like to work for him.

Mr. Starkey—We will say that this block that rests on top of the wax has on top of that spring—one of the little, common, coil springs like under a wagon-bed. On top of that a plate that this screw comes to. If the screw strikes on that spring and forces it close with this pressure on the block, and goes down to where the wax is, instead of the pressure being lessened this spring continues to draw the pressure on this block-head to every part that has given way by the wax. I think that is a very valuable point. Instead of having to come back, this spring will carry the pressure on four or five times, and it will save valuable time that a man might be doing something else.

Dr. Miller—Mr. Root says it is so little time that it don't count.

Mr. Meredith—I should say a spring strong enough to give that pressure would be something a little larger than is used on the ordinary passenger coach.

Mr. Root—I understand that spring would act only when the screw wasn't acting. It is their opinion that the spring would do what you would do when you got back there.

Dr. Miller—Yes.

Mr. Root—You can't make me believe that the spring would be strong enough to do what you would do.

Mr. Starkey—We don't contend that it would do all, but it would continue to exercise the pressure. If we should happen back we might turn once, but you would turn four times.

Mr. Root—In the meantime, the whole operation takes seven or eight minutes.

Mr. Moore—The temptation to trip Dr. Miller up is too great.

Dr. Miller—I am down by now.

Mr. Moore—How many tons pressure is there in that screw pressing down the wax, as nearly as you can tell?

Mr. Root—Three or four.

Mr. Moore—You take the strongest spring you ever saw in a lumber-wagon, and put three or four tons on it, how much good will it do you? Mr. Meredith says a spring on a passenger coach.

Mr. Meredith—With a screw of four or five threads to an inch, it might be capable of exerting twenty tons.

Mr. Root—There is hardly any limit.

Dr. Miller—I don't think the point is worth holding to. A spring that will exert one pound of pressure will continue that pressure.

Mr. Root—I admit that.

Dr. Miller—And the strength of the spring doesn't count, but the whole thing is settled when he says it takes so little time to do it that the time cost isn't worth counting.

Mr. Root—Dr. Miller wouldn't have a good deal of time to get away to his other work before he would have to get back and put in another comb.

Mr. Stewart—Have you ever cut up timothy hay and put in with your cheese?

Mr. Root—No, I have not.

Dr. Miller—Have you done that?

Mr. Stewart—I have, and with very good results. It gets it separated.

Dr. Miller—I want to remind Mr. Root to read a periodical that is published in Medina, Ohio, in which that was mentioned as being done in Germany.

Mr. Root—You've got me there.

Pres. York—What's the name of the publication?

Dr. Miller—*Scrapings*—or something of that kind.

Mr. Root—I will read it.

Dr. Miller—I think it was your brother who asked whether a central affair, something in the middle of the cheese, allowing the wax to come out through, would help any. He tried that, I think.

Mr. Root—As I look at it, the wax below wouldn't go up to that, and when I get about the wax that I could get anyway, I don't see the advantage of it. You would have to have twice the amount of wax, and you cannot give it the amount of pressure it ought to have.

Dr. Miller—I tried it and I don't believe it helps.

Mr. Abbott—How many people are there here who get 100 pounds of wax every year? [Six.]

Mr. Abbott—Now you see you can get, what percentage more?

Mr. Root—I can't give the exact percentage more, but probably one-fourth.

Mr. Abbott—One-fourth of a pound would be 25 percent of wax. What does a German wax-extractor cost?

Mr. Root—$14.

Mr. Abbott—25 pounds of wax at 20 cents a pound—what I am trying to get at is an opinion as to how much interest there is in this convention investing $14 in a machine. Not all these theories will work, but they must ultimately work out in dollars and cents or else they are of no use. Just trying to see how much it would amount to, to this convention, provided they save what he says they can save. You have six people saving 25 pounds of wax in a year, and what I want to see is if it would pay you to invest $14 in any kind of a machine.

Mr. Root—I don't think it would pay the small bee-keeper to get a German wax-press. I don't know what my brother would say, but I believe that.

Pres. York—You can tell the truth here! [Laughter.]

Mr. Root—I believe my brother tries to tell the truth. I would try hot-water pressure.

Mr. Baldridge—Especially on cappings.

Mr. Root—You can get almost all the wax out of the cappings.

Mr. Baldridge—By setting in water it will all rise.

Mr. Root—This I am speaking of is only in reference to combs.

Mr. Abbott—May I tell a small bee-keeper how I do? It seems like a simple, small way. If you have 50 or 60 pounds of combs, pour warm water on it and let it soak thoroughly. My wife does that; I don't suppose I would bother with it. Then she has a large pan that fits inside of the oven. She puts in the wax that would weigh four or five pounds on top of a large sieve, and shuts the oven door and goes on about her business. In a little while the wax is all down in the water, and then she takes the sieve and puts more in, and if done that way it about all goes to wax. There isn't much left to throw away.

Mr. Root—Are they old combs or new?

Mr. Abbott—Any kind she wishes; just combs that are thrown in a barrel or box, sometimes sections. Directly she has a cake of wax that weighs eight or ten pounds; but she always soaks it in warm water and doesn't scald or do anything else with it.

Mr. Root—I have heard of that method before. You put the wax in the receptacle right in the oven.

Mr. Abbott—Yes, and she keeps it there and shuts up the oven, and in the morning the settlings are all out and she has a cake of pure, clear, yellow wax. She makes it in little cakes, and we sell it for 60 cents a pound.

Dr. Miller—I have been figuring that over, and it looks to me a little like this, after raising the question of whether I could afford it or not: The expense of the machine and time will cost me about two dollars a year, perhaps, allowing a good interest on it. Now, I must make that two dollars every year, and if I get 28 cents a pound for my wax, as I suppose I can, then I must get seven pounds of wax extra in the year to pay expenses, and if there is left any debris in the slumgum as much as one-fourth of the wax, then that seven pounds represents the total of my wax for the year at 28 cents a pound. So if I am getting 28 pounds of wax every year, then I can afford to have the German steam wax-press.

Pres. York—It is all right outside of Missouri!

Mr. Moore—I think Mr. Abbott had these small bee-keepers scared. You know how much you expect from your bee-hives and wax-press. The cost is $14. If you can make 20 per cent, $2.08, that makes nine pounds of wax per year extra; then you can afford to have a German wax-press.

Dr. Miller—I called it 7 pounds.

Mr Meredith—Cannot a German wax-press be made on a smaller scale, and price in proportion?

Mr. Root—The way the press is made, the money is in the workmanship more than in the material, and it would be just as hard to make a small one as a larger one. Another thing, the small machine wouldn't begin to be as effective.

Mr. Meredith—In what way?

Mr. Root—You could get about the same amount of wax, but the pressure has to be just about as great for the small machine as for the large, and, if you make a small machine, you have to make it as strong as a big machine, and the workmanship on it requires about as much brains and tools.

Mr. Abbott—What would a home-made machine cost?

Mr. Root—Not 60 cents.

Mr. Abbott—How much better would the German wax-press be? Would it get more wax?

Mr. Root—You wouldn't get any more wax, but you would get it so much quicker. As I said, I can get just about as much wax from the hot-water method as I can with the steam, but it is more mussy, and I have to work harder.

Mr. Abbott—My wife attends to the work!

Mr. Root—May be the bee-keepers are not all blessed with wives.

Mr. France—I was at a local bee-keepers' convention and this subject was brought up. They decided the wax-press was a good thing, but in a small way could they afford it? We, as members of our local association, can afford to own one, and that one press has gone the rounds, and each member has rendered all the wax he has, and at only a cost of 15 cents.

Dr. Miller—I want to say that of all the mean things Mr. France ever did to me, that was the worst. I was going to tell what they did in Germany. That's what they do there. The local societies own the machine. That's the way to bring the price down.

Mr. Root—Isn't it a fact that farmers will club together and get a binder or mower, and then they trade around?

Mr. Smith—They might do that in Ohio, but not in Illinois.

Mr. Root—I know of several who do.

Mr. Wilcox—Partnership ownership of necessary tools is not satisfactory.

Mr. Root—I won't dispute you about that.

Dr. Miller—That's a matter of locality!

Mr. Smith—I was born and raised in Ohio, and I remember we used to have an apple-butter kettle, and that's the way they boiled their apple butter. In the spring, when it came sugar-making time, we couldn't do that because the sugar had all to be made at the same time, and that spoiled the scheme—it wouldn't work. The Ohio farmers are not as large, and they can work reciprocity more. The great secret to get the wax out is to keep the wax from going into the old brood-comb cells or cocoons that are left by the young bee, and if you water-soak them in warm water—if the wax melts and runs into these cells you have to heat them to get it out. The wax is on the outside between the walls of these cells. Fill the comb thoroughly with warm water, and mash, and then put in the oven wet over a drip-pan, and you will get better results than with an ordinary press, and you can do it at any time.

Mr. Root—I don't see how that can be done in a wholesale way.

Mr. Smith—A man who has 30 or 40 hives—comb that isn't brood-comb—can extract that at any time; but when you come to an old brood-comb and lay it in the solar extractor dry, the cocoons fill, and the center of gravity will lie in that position so it can't get out.

Mr. Root—I have the advantage over the wax-press. I picked brood-comb many a time with a knife and have taken a very small handful of it and put it in a little cloth package in boiling water, and but very little wax could I find in there, and that's doing it in a wholesale way. It is all done in bulk. If a man had three or four barrels, I don't see how it would pay him to do it in an oven.

Mr. Starkey—About how many pounds of wax will ordinarily be taken from one filling of the wax-extractor, of mixed and broken combs? How much wax from one filling of the machine?

Mr. Root—Do you mean with the German wax-press?

Mr. Starkey—Yes, sir. How much will its filling once ordinarily do?

Dr. Miller—Allow me to preface this question with this: How much do you consider desirable to put in at one time?

Mr. Root—10 pounds.

Mr. Starkey—How much wax will you get out of that?

Mr. Root—It averages a little less than three pounds. I remember taking note of the fact that the average was not far from the exact proportion that was obtained from the hot-water press.

Mr. Starkey—I would like to relate a little experience that I had. I gathered together a great many old combs of all descriptions and broken, and some that had a great deal of cocoon. I had possibly a barrel full after it was well packed. I had one of these ordinary 10-gallon wash-boilers, and a two-burner gasoline stove. I filled the boiler with four inches of water in the bottom and set the gasoline stove to going with both burners. I put in this boiler almost two-thirds of this barrel, so as to allow me to stir it as the water heated. On top of that I put a board that I cut round so as to fit inside loosely, and took an ordinary gunny-sack and wrapped it over that so it would be around the edges, and pushed that in sung. I boiled this about 1½ hours while I went on about my other work. I took an ordinary Langstroth frame, and from a point three or four feet from there I put a board about the same height. This frame would go inside the boiler, and the board rested on something else to prevent it from falling over sidewise, and to prevent it from breaking down, and whatever happened to be handy I threw on top of this board and this frame pressed the board down, that I had the gunny sack on, and when I came back it had gone down within six inches of the water, and the water had risen above the slumgum and board. I simply threw off the weight and poured it in Simplicity bee-hive covers—they will hold about 14 pounds of wax; I poured out 24 pounds of wax from this rendering. I didn't spend more than ¾ of an hour. I got very little wax from the slumgum. That would be about as simple, and take less time to get the same amount of wax. I have used the German wax-press and I like it, and I think it is a very handy thing to have, but I can get along so easily the other way that I wouldn't think of buying one.

A Member—You simply used Mr. Abbott's sieve in another form.

Mr. Starkey—The weight is so light that the water boiling would stir up the cocoons that would hold the wax, and allow the wax to escape, which it would always do, to the top, the water being very heavy. The water is a very important element. It is heavier and it gets through the cloth.

Mr. Root—Your method would take a great deal of time compared to these other methods.

Mr. Starkey—In what way? I did nothing but fill the kettle and pour off. I would go and put in more as it cooked down, as it melts.

Mr. Root—Your actual work was little.

Mr. Starkey—Very little.

Mr. Root—That might be a very good way.

Mr. France—Did you clean that boiler or let the housewife do it?

Mr. Starkey—I cleaned it. There was some slum. My wife don't use this boiler. I never let her look at it, even. I scraped the slum out when it was dry. I had no trouble doing it. While I am speaking on this subject I want to say that I wouldn't even ask my wife to let me cook it in her kettle.

Mr. Niver—When Mr. Coggshall is getting old combs and scrapings off of the floor and everywhere else that he gets them from, he puts them into gunny-sacks as fast as he gets them, and at some time when he has not too much to do he puts them in a kettle, sinks in several gunny sacks of this comb, and puts under a long lever with weights on it, and then he goes on out to the barn and presses a carload of hay; then comes back and takes out what wax there is, and commences over again. That is his method under the lever pressure in a caldron kettle with fire under it. That gives heat and pressure.

Mr. Root—Do you think he gets all the wax?

Mr. Niver—He hasn't time to worry much about that.

Mr. Root—That's the question. I don't think the wax can be gotten that way, so much of it, compared to the pressure. In my experiment I found that if I put a great deal under pressure I didn't get it all. The question is whether you want the wax or the time. If your time is valuable, I would by all means use some method as that, or the press when the wax is heated in some other place. If you want the wax, I still insist my method gets it.

Mr. Wilcox—Do they leave it in the kettle cold?

Mr. Niver—It rises to the top of the can. He will have several hundred pounds at a time at work.

Mr. Wilcox—You leave it there to cool. I think I have observed others who have tried it, and there is danger of a little iron-rust coloring the wax.

Mr. Thompson—Has anyone ever used additional screens in the solar extractor for turning after it had gone to the bottom once? I had an extra screen made for mine last summer and I think it was satisfactory. I couldn't find any wax in the refuse after that, where if allowed to remain in the bottom there would be wax on the edges and around the bottom.

Mr. Moore—How many have the German wax-press? [Four.]

Pres. York—Mr. Wheeler tell us about it; you raised your hand.

Mr. Wheeler—I think of nothing but what has been spoken of.

REPORT OF THE FOUL BROOD COMMITTEE.

Pres. York—We will have the report of the foul brood committee. I think they are here now, and perhaps ready to report.

Mr. Moore—A year ago Pres. York appointed three of us as a foul brood committee to co-operate with the committee from the Illinois State Association to get a law through the legislature. Your Secretary, Mr. Kanenburg, and Mr. Clarke, were appointed to act as such committee. I will simply say we did a lot of work, and we got the law. The two associations working together seemed to carry weight with the legislature, and it didn't seem to be a hard matter to get that law through. The law is now on the statute books, for an appropriation of $2,000 for the Illinois State Bee-Keepers' Association. It had to be in the name of the State Association, first, because it is a State organization, and second, because it is incorporated. The proceedings were very interesting, and if there was lots of time we might tell you about it in detail. There was a lot of work done. Letters and circulars were sent out to every bee-keeper we knew of, to every member of the legislature, especially, members of the committees to which our bill was presented, and representatives of the House and the Senate, telling them the strongest things we could think of on the subject. We told them we had just as good a right to have a foul brood law as we had to have a law against smallpox being carried around in the public schools and along the street. The result is we have the law. And there don't seem to be any reason why the Association should not have this money appropriation every year as long as they choose to ask for it.

Mr. Starkey—I would like to know if any arrangements or provisions have been made for the members of the bee-keepers' association to get copies of that law or enactment?

Pres. York—It was published in the American Bee Journal.

Mr. Smith—I will just state that a great many bee-keepers think that there is a compulsory clause, and there is not. It simply says: "To be used by the Association for the extermination of foul brood." Of course, if a man has foul brood in his apiary we can go there and tell him so, but we can't make him clean it up unless he chooses so to do. What we would like when the next legislature meets is to have a compulsory clause, so we could do something with the people who are notified that their bees have foul brood and will not clean it up. In my last fall's experience in going over the State, I found people paying no attention to it at all. Some people's bees had it and they were cleaning up their bees but their neighbors across the lots had it and wouldn't do anything. Now there is where the trouble comes in, and at the next legislature we propose to have an act submitted, and we would like the co-operation of this Association to get that passed, because that will be the only way by which we can get relief in the proper way.

Mr. Moore—Have any bee-keepers having diseased bees refused to let you examine them?

Mr. Smith—No, sir; but some might. We would like soon to have a law so that the foul brood inspector can go there and demand the right to inspect all their bees. I guess Mr. France knows something about that.

Mr. Moore—Did you ever suggest to them that there was a way that they could be got at; that they were harboring a disease?

Mr. Smith—They want to know the law right away. I haven't any law. The first question is, Have you a law? If so, I want to see it.

Dr. Miller—I am exceedingly thankful for the appropriation, but the truth is we haven't any foul brood law. There is an appropriation for the State Association, but we haven't anything in the shape of a foul brood law in the State, and we need one. I would like to ask Mr. France how much he thinks he would be helped in the matter; how much difference would it make in your work in the State whether you go with the law back of you, or simply with enough money back of you to bear expenses?

Mr. France—I would feel like resigning my work. I go to A; his bees have foul brood. He is glad to take care of it. B, C and D have a few bees and they don't care, and they are not going to take care of it. Now in Mr. Smith's position he has no authority, and it is pretty bad. It doesn't make any difference whether one colony or 100 colonies have the disease, it must be treated or it is a violation of the law, and the man allows you to inspect or treat his bees.

Mr. Pottenger—There is a man keeping bees near Kankakee, who says he would like to see someone come into his yard. He would not permit anyone to come in and see it at all.

Mr. Whitney—If you had the Wisconsin law he would.

Mr. France—The first summer out I had to meet men at the gate with a shotgun or a bulldog, who demanded me to—.

A Member—The official has the authority of a sheriff, and if they undertake to bother you, give them over to the authorities, and you treat the disease. If a man interferes, put him under cover.

Mr. Smith—That's what we want.

Mr. France—I would suggest that in order to get that law it will be necessary to show how much benefit your Association, through your inspector, has had through the appropriation, and how much more has gone undone because of the need of this law.

Mr. Smith—We will have a report of that kind.

Pres. York—The legislature meets a year from this winter.

Mr. Kanenburg—Why didn't they put in that clause in the first place? When we put in our bill we were a little later than the men of the Illinois State Bee-Keepers' Association, so of course our bill was a little too late. If that clause had been in, I suppose we would have gotten the law just the same. I know Representative Austin would have gotten that just as well as the law we did get.

Mr. Smith—We interviewed the members of the Appropriation Committee and they refused to put anything in in a compulsory way; said that it would not pass, and therefore we put it in in this way. We thought this would be an entering wedge.

Pres. York—It was either that or nothing.

Mr. Kanenburg—This law was put out of the tracks altogether, and if it hadn't been for Mr. Austin we wouldn't have had it.

Dr. Miller—As Mr. Smith has placed before us, they would do nothing about a law if you insisted on putting this compulsory clause in it. They said we will give you the appropriation. The question was, Shall we take the appropriation and get a little done by it? and I believe they were very wise in taking it. We haven't any foul brood law. Let's get one. He can tell them at the next legislature, Here, you gave us so much, and we can do so much good with that, but we need a law if we are going to do any good.

Mr. Smith—The idea was this: By getting this appropriation—of course, it was late last summer when we got it into our hands, and too late to do anything to amount to much, and we thought this winter we could have pamphlets printed on this subject and distributed all over the State to every bee-keeper, and published in the farm journals, and especially in the bee-papers, and in that way we thought we could reach the people so that the bee-keepers would assist us in having a law passed that would make it a penalty, and I think we can do that. We expect to have quite a lot of material printed this winter, and mailed out to all the bee-keepers we know.

Mr. Wheeler—One question in regard to how many people were helped by this law. How many are there here who were helped by the foul brood inspectors of Wisconsin and Michigan? I would like to know who they are, and what report they give. A great deal depends upon what they report, to know what we want. We have listened to the inspectors, now let's listen to the people who have been helped.

Mr. Wilcox—There isn't a man, woman or child here, or elsewhere, but what has been helped directly or indirectly, for everything that helps to promote the bee-keeping industry, helps neighboring States. It helps all who buy honey, bees or supplies; it helps all who have any dealings whatever with bee-keepers, and a foul brood law, in fact any law, that helps the Wisconsin bee-keeper helps you. You are helped by our law, and it is morally certain that all the good we do is shared, indirectly at least, by all.

Mr. Wheeler—Has Mr. Wilcox been helped, or any of his neighbors that he knows, so that the disease has been stamped out?

Mr. Wilcox—If you had the smallpox here in our community the Board of Health would exterminate it.

Mr. Wheeler—We are not talking about smallpox; I am talking about foul brood.

Mr. Wilcox—It is the same kind; it is an infectious disease, and it spreads rapidly and far distant. Our Wisconsin law is copied after the State Veterinary law, and is carried for contagious diseases among live stock with the same powers and duties, and all are benefited because we are benefited.

Mr. Meredith—I will say this in regard to those being benefited. Last year I brought a comb in here, not knowing what the condition of it was, and I found it foul brood, and by following up the treatment as suggested by the Wisconsin inspector I have cleaned up my yard of what little I had. So I have been benefited by knowing that my bees had foul brood, and by using the suggestions about taking care of it.

Mr. Abbott—How long has Wisconsin had a foul-brood law?

Mr. France—Our law now has been running seven years.

Mr. Abbott—It ought to show results.

Mr. France—I don't like to be personal, but going over into Mr. Wilcox's district, I found apiary after apiary that they said they hadn't gotten any honey from for years, and they called it bad luck and a poor season. Another season I came back there and they said they had the biggest crop of honey they had had for years. Now, as to the amount of seven years' work, I have cured over 11,000 cases of it, and I don't know of but three places where they had it that they have it to-day. What would you do if you had 11,000 cases of some very contagious disease?

Mr. Abbott—I want the real gist of it. You may have cured 11,000 cases, but if the 11,000 cases are cured, are there 22,000 cases left? Here's the point: A noted stutter doctor had a great many patients coming to him, and he had a world-wide reputation, and people were all hunting him up. There was a man going along the street who wanted to be treated. He met a man and asked him about this doctor. He said, "Well, I—I—have known him; he—he—he—c—c—cured m—me." Now, then, that's the question. Have you done it that way, or is it being wiped out of these places? I am inclined to think that it is being wiped out. Can you wipe it out?

Mr. France—We will never wipe it out until all the States have the law. Illinois has imported it. Over four or five times I stopped it coming into my State. To-day I know of it in only five counties, and when I started it was in 50.

Mr. Wheeler—That's Mr. France. Now, the question is, if after Mr. France goes into an apiary and treats it, is that apiary forever cured of it, or apparently for one year or a little time? He may lay it to some other State, or someone else in the neighborhood, but I have my doubts about it, and I would like to know. Stick to the same question that I put first. Are there people here who, after six or seven years, have had foul brood permanently cured by Mr. France or any other State inspector?

Mr. Horstmann—I have cured foul brood. I know that they can do it as well as I can, and people are bound to be benefited. I had foul brood just about as bad in my apiary as I ever heard of, or knew of, and I don't believe there was a bit last year, and I had any amount of it year before last. We want a foul brood law in this State so that the inspector will have a right to go in and examine bees and treat them. I would never hunt up an inspector to come and treat my bees. I would dig right in and treat them myself. The people who will not treat their bees are the ones we want to get after, and if there was a foul brood law we could force them to clean up. I am rid of foul brood now, but there isn't any telling how long I will be. The bees may get foul brood from some other apiary. I cleaned out an apiary to get it out of the neighborhood. Will it return? I may have had a cold last year and have another this year. It is not the same cold. You may cure your foul brood this year and it will be new next year. That's the way I look at it.

Mr. Wheeler—I call the gentleman to order. We are not talking about colds nor about smallpox. We are talking about foul brood.

Mr. Horstmann—We must give illustrations to make people understand what we say.

Dr. Miller—Without using any illustration, let me say to you how I would feel supposing I knew of a case of foul brood in the apiary of a neighbor. I would send word to Mr. Smith that I wanted him to come there, and he comes. I don't know enough about it to decide whether it is foul brood or not, and I will go with him over to the neighbor's, and the neighbor says, "You go to ——, France!" and Mr. Smith and I will have no chance to go in there, and if there was a law back of him we could go in there, at least Mr. Smith could, and I suppose I could go with him if he appointed me to assist him, and we could do what can be done toward eradicating that disease there. Now I am helpless. Anyone who has foul brood can come and set it down within half a mile of my place and I can't help myself, and it isn't germane to the question whether I can tell a man who was helped this much and that much, and it is germane to use something analogous. The fact is that smallpox has never been wiped out. It is in existence now in the same form that it was when I was a boy, and in spite of all the laws and endeavors it continues, but you don't see people marked with smallpox to-day as when I was a boy, because it is suppressed. Smallpox isn't foul brood. Foul brood can be suppressed to an extent. Suppose now it is entirely wiped out. Even then I am safer if I can have done what can be done with a diseased apiary close to me. There is no sort of a question but what a great deal can be done to overcome it. Some of the New England States have foul brood laws; also in Colorado, Michigan, etc. They have them in Canada. They have had them for years. They are tried there. In Canada, Mr. McEvoy did a grand work. If there had been no foul brood inspector, wouldn't it have gone on and wiped out all the bees? They have their bees there is spite of the disease. Now if there is a law that obliges a man to do what he can to crush out the disease, that will be a help to me, no matter if he is clear over on the Wisconsin line. Mr. France is helping me because I am only 15 miles from Wisconsin, and any day it may come—within two years at least—to my place. There is no question but what we need the foul brood law, and the States that do have it don't go back on it. They have it, and don't say it isn't of any use, and we won't have it. We need the law, and we need to do what we can. I venture to say that there is more foul brood in Wisconsin than is desirable, notwithstanding the good work Mr. France is doing, and he will be old and gray-headed, but it would be a great deal worse if they didn't have a foul brood inspector there. We simply have that appropriation, and Mr. Smith has done—I don't say how much, but he cannot do what he ought to do until we get the law. I want it for my own personal security.

Mr. Moore—It seems to me that perhaps this discussion has gone on about long enough, but if you will pardon me, I will give an illustration. How many times, Mr. Smith, have you tried to get a law since 1894?

Mr. Smith—Every legislature.

Mr. Moore—Last fall there was ground broken to get a law for bee-keepers. Mr. Smith and the State Association had been doing what they could, and we didn't get awakened up until several months later. I think it was in January that we got to talking about it. We decided that the Chicago-Northwestern Association would join hands with the Illinois State Association and see if we couldn't get a foul brood law, so through the American Bee Journal's help and other personal help we went for the bee-keepers. We said, "Subscribe your money, and we will do some work," and with the Illinois State Association we went and got a law. We did everything we could think of. Dr. Miller gave us valuable suggestions which we carried into effect, and we carried into effect every suggestion that our friends gave us. We told them, "This won't do, but it is one of the things we must do to get a law." A day was appointed, and our Secretary had the honor of going to Springfield on the day the bill went in, and the committee on appropriations for the House and for the Senate both had their hearings the same day, and very kindly listened to the committees addressing them. Our Secretary went to the State House and got a copy of the bill as introduced. It was our intention to follow the Wisconsin law as we supposed should be done. The members of the Illinois State Association said they consulted with their friends close to the legislature, and that they failed every time so far since 1894, and were told that if they put a bill in with that clause in it they would fail, and consequently introduced a law that would pass. When our committee got there we found it had already been introduced by a member in the House and a member in the Senate. I personally consulted with Mr. Austin, a friend of Mr. Kanenburg's. I told him it was a personal matter in which I was interested, and then asked him as a friend to push it. I talked to him at great length. He talked to me about this drastic clause. I said, "Mr. Austin, we are going to have that in the law."

When I got to Springfield I found the bill was already introduced. We could go on and introduce another bill if we chose, or Mr. Austin would introduce it for us, but our friends said if you introduce another law the chances are we would kill both of them, so we decided it was best to get what we could this time and hope for better things in the future. Mr. Austin said, "What is the matter with it? There is no clause in there for compulsory inspection." I explained to him that they had already started their bill through the grind, but I said, "Mr. Austin, I tell you, if it comes to me to enforce the law, I will put in motion the machinery we have aside from the Wisconsin law to compel any given party to submit to proper things. I said there is a general nuisance law under which any person can be prosecuted." I would first write to such a party, "We have information that you have foul brood in your apiary, and we recommend you to submit to the treatment." If he doesn't answer, I would say, "Now, sir, a certain day we shall prosecute you before this court for maintaining a nuisance." I tell you, ladies and gentlemen, I believe in a majority of cases moral suasion will work, but this authority of prosecution, that is my thought, and as I explained it to Mr. Austin, and if any case of that sort comes up to me I will make these people, and if I am backed by the Association, I will carry it into court and do something under the nuisance act. There is a nuisance act, and it will cover every possible case of a nuisance.

We have been blamed for not getting what people thought we ought to have gotten, and I spent weeks on this question, and felt sensitive that we were blamed for getting half a loaf when we ought to have gotten a whole loaf. We would have gotten nothing. That is the situation, and Mr. France has said if we make a showing before the next legislature that we have done well, as good and faithful servants, they will give us any law we ask them. They fired questions at us. Why didn't you get your law last year? It is a point in our favor with the next legislature that we got some kind of a law at the hands of the last legislature.

Mr. Wheeler—You may think I am overbearing. I am interested in this question, and I would like to hear from the people who have been helped by the state inspector. I don't care to hear from the people who have wax or foundation to sell, and people who are inspectors, but from the men themselves who are interested and have bees.

Mr. Smith—I will just state that the men who are here are practical bee-keepers, and they are their own foul brood inspectors. A man that will allow foul brood to come and stay in his apiary is no practical bee-keeper, and I don't believe a man of that kind would belong to an organization. Outside is where the trouble comes. I was within 17 miles of Dr. Miller's, I was near Crystal Lake, as far as Mattoon, and south to East St. Louis, and Danville, and when I was out 20 days I had visited 42 apiaries, and there were over 300 colonies that I treated. You see, I only had 20 days to do it in. I would have been out longer only sickness at home brought me back. I was due up at Kankakee, but the season got so late we couldn't do much. We all have to work together, and if there is any bee-keeper who knows of a case of foul brood it is his duty to correspond with the inspector and have it treated. We have men in this State that are selling bees and queens that have foul brood. I want to get after those fellows. They are the ones that are scattering it broadcast. I lost 82 colonies of bees by buying queens. Two of my neighbors near by lost 102, and another lost 42. It wiped their apiaries clear out. They didn't know what was the matter until they were all gone. They brought their queens from the same party. I understand this party has been buying bees promiscuously and shipping them all over the State. He doesn't care anything about it. I understood parties in Cook county bought bees of him, and they were all diseased, and their apiaries had never had it before. If we can't work as a unit as bee-keepers, we can't do any good. We want to all stand together. If you know a case in your county, it is your duty to report it.

Dr. Miller—I didn't know there was one.

Mr. Smith—I don't believe all foul brood will ever be exterminated any more than smallpox.

Dr. Miller—I would like to have a minute and a half of private conversation with Mr. Wheeler. If you had no foul brood in your own apiary, and there was a case that you knew of within a half-mile of you, a man who had one colony, and that colony was rotten with foul brood and you knew it, would you, or wouldn't you, want to oblige that man to burn up that colony or treat it in some way? Wouldn't you want the chance to say that he *must* do that? You know you would. I want to tell you that if it comes to that, you won't stop to ask how many have been helped by it. You would say, I want that law right here now to help me.

Mr. Wheeler—I couldn't answer that. It would take too long. I rather think I would treat that with moderation.

Dr. Miller—You would want to force them.

Mr. Wheeler—You are not the man I took you for. I have other reasons.

Mr. Abbott—This is a matter in which I have been trying to get certain facts before the public. I understand there is a reporter taking this, so we want to be careful what we say. There is no use of Dr. Miller talking to Mr. Wheeler, and Mr. Wheeler talking to him. It is a fact that no man can get around, that legislative committees are influenced by facts, and not influenced solely by the facts that are presented by the official. If the official, when he gets there and makes his statement, cannot have it backed up by the individuals who have been helped by these actions, that report of that official will not be worth very much before the legislative committee down in Missouri. What I was after was to get such facts from the people who had been helped as would make a tremendous leverage under the legislature of Missouri so as, if possible, to boost them up and give us a law. What we want is combined influence. Co-operation. How? If these bee-keepers have been benefited in Illinois, and they have been benefited in Wisconsin, and they have been benefited somewhat in Michigan, is it not possible to use this as an accumulative force to use in other States? That is what Mr. Wheeler is trying to get at. I expect to be before the Missouri legislature to talk on this subject, and I want something to talk about. I don't want to have to say the commissioners report so and so, but I want to be able to say that the people who have the bees say so and so, and we are interested.

Pres. York—There are hardly enough here who have been helped. In Illinois we haven't had the inspector long enough. There are only a few bee-keepers here from Wisconsin, and only two or three from Michigan.

Mr. Johnson—It seems to me as if the question to be discussed is as to whether it would be important for us to have this compulsory clause in this law. The law we have is good for Illinois. If I get foul brood among my bees I can send for Mr. Smith, and he would come and rid me of it, but if my neighbors have foul brood, which they very likely will have if my bees have it, Mr. Smith can't go over and do anything until they are willing to have him, and if they are willing he can do so, and in that way if the neighbors are willing the law is good and it is all right just as it is. It would make it more complete if we had this clause in it, and that is just what we want. What encouragement can this committee, Mr. Smith and others, give us that we can get this in the next legislature?

Mr. Starkey—I would like to address myself straight to the question if it were possible. The question is one supposed to be answered by the people who have had benefits. The very fact that this law has been in force only a very short time, and that possibly with the exception of three or four people in this house, and also the things that have been done could not apply to the question of the gentleman because none of the work that has been done has been done more than three months, and if that is true, no man could get up and say that two years ago I had some things done and it is well done. I believe the question is not appropriate under the conditions of this convention.

Mr. Reynolds—Mr. Wheeler was talking about the law in Wisconsin.

Mr. Starkey—The Wisconsin people are not at this convention. My statement is still true. It cannot be answered in this convention.

Mr. France—I may be considered as a man having an ax to grind. The bee-keepers of the United States—why, I don't understand, but the conditions are so. Say I am inspector of Illinois, and I should go to one of your apiaries and find the disease there. It would be treated. If in my annual report I would say I have been to Mr. York's apiary, he having supplies to sell or queen-bees to sell, or he even buying and selling, the making public of the fact of foul brood the bee-keepers would ignore him and they wouldn't touch him, or put their hands on him. Experience has proven that we must not publish the names, but if you want a list of those whose bees have had foul brood in Wisconsin, and have not got it now, I can give you pages of them.

Mr. Coverdale—Nineteen years ago foul brood was introduced right close to me. It happened that I was right on the ground and saw it before it got into more than three colonies. These colonies were hunted up and treated, and exterminated, and banished on the spot. If I hadn't seen these we wouldn't have been able to do that. There isn't a case of foul brood among my colonies now. I think a great harm was headed right off. I believe in extermination of foul brood. I thought I did a grand thing.

Mr. Wheeler—I doubt if those bees had foul brood at all.

Mr. Coverdale—I am familiar with it. I can tell or smell it, or if any other bee-disease, I can tell it.

Pres. York—I think so.

Mr. Smith—If there are any in this audience that haven't seen foul brood, or don't know anything about it, I have a full comb of it in the other room. They can go in there and acquaint themselves with the condition. If you get a smell once, you will never forget it.

Mr. Duff—We bee-keepers in Cook County ought to know the names of the queen-breeders who sent out diseased queens. It is only just. An ounce of prevention is better than a pound of cure.

Mr. Smith—I will just state that in this case I judged from the results. They were persons whose bees never had foul brood until they got queens from that dealer.

Mr. Duff—I should think that would be enough.

Mr. Smith—That man has an apiary at his home place, but I understand that he had three out-apiaries. I am going down there to demand inspection of his apiaries, and he will say, "That's where I rear my queens, go and look at it." I look there and find no foul brood, but I don't know the condition of his out-apiaries, and as long as I have no law to go there and demand an inspection, he might say, "My bees are all right, and you mind your own business." Until we have a law of that kind I would not be willing to say who the party is, but Mr. York knows those in Cook County that have had queens from him, and their results are the same. They never had foul brood until they got queens from that dealer.

Mr. Hogge—The main point is, Do we want help from the legislature in the way of this compulsory clause. It is not a question whether somebody has been done good or not, but the question is, Do we want the inspector to be empowered so that he can go in case we do know, or do believe, there is foul brood near us?

Pres. York—Do you want to put it to a vote?

Mr. Hogge—Yes, sir.

Pres. York—All in favor of having such a compulsory foul brood law in this State, raise your hands. [Practically a unanimous vote in favor.]

Mr. Clarke—Foul brood being carried by queen-bees, I would like to know in what way it is carried.

Mr. Smith—By the honey that is in the queen-cages, and by the no doubt taking out the infection of the queen-cage. I think it can be carried that way.

Mr. Kanenburg—As long as we have voted that we want this compulsory clause in the law, I wish to make a motion that—.

Mr. Moore—Some of us may not know that the legislature meets only every two years, so nothing can be done until December, 1904. This is merely breaking the ground for what we want to do at that time.

Pres. York—What will you do with the report of the foul brood committee? They can do nothing more until the legislature meets, which is a year from this fall.

Mr. Starkey—Thank the committee for its work, and discharge it.

Dr. Miller—I want to mention one point which possibly might surprise you a little. There was a certain amount of money raised to pay the expense of the log-rolling that was to be done to get what legislation we could get. As you know, there were some of us who were appointed an auditing committee to look over the accounts of the treasurer, and one of the items that surprised me was a certain sum, something like $9.00, that was turned into the treasury of this society that was left of the amount raised to pay for the work of that foul brood committee. Now, I would like to know why this committee didn't use up all the money in junketing? I don't understand it. So instead of this society being out any money, it actually made a profit out of it!

Mr. Horstmann—I like Mr. Starkey's motion, with the exception of discharging the committee. I think they should be continued. I offer an amendment, that the report of the committee be accepted, that we thank the committee, and that it be continued.

Mr. York—With the consent of the second we will make that the motion.

A vote being taken, the motion was declared carried.

(To be continued.)

Report of the Proceedings of the Colorado State Bee-Keepers' Convention, Held in Denver, Nov. 23, 24, and 25, 1903.

BY H. C. MOREHOUSE, SEC.

(Continued from page 37.)

Next was a paper by R. C. Aikin, of Larimer Co., Colo., on the subject of

HOW TO PRODUCE FANCY EXTRACTED HONEY.

The subject is not well stated. If it said "fine" or "No. 1" extracted honey, it would suit me better. The people who put up their honey in fancy packages are the ones who put up the fancy article. I believe I know how to produce a No. 1 article that may be sold as fine or No. 1. I am considerable of a crank on this subject, the same as in methods of management of bees.

What is No. 1 extracted honey? It is well-ripened and thick, and has a good flavor. The flavor depends largely upon the bloom; the body or quality depends largely upon the management. Many advocate and practice extracting before the honey is fully sealed. In a damp climate this is altogether wrong. In a dry climate it is not altogether wrong, but nothing is gained by it. Never, in any climate, extract before the combs are half to two-thirds sealed. Let it remain on the hive long enough to become all ripened. But to get a good article, that is not all. In extracting you always incorporate with the honey minute chips of wax and bubbles of air. Both of these, in their relation to honey, are impurities. The honey should be clear, and free from all impurities. As the honey weighs 12 pounds to the gallon, and the wax approximates 7 pounds to the gallon, if there are any chips of wax in the honey, gravity will separate them. The same is true of air. When a tank is filled with honey, it contains a large quantity of air. The warmer the liquid the quicker impurities come to the top. Almost any impurity will rise to the top. Therefore, it is necessary to have a large settling-tank. It not only secures well-strained honey, but is also a great saving in other ways.

A number of producers advocate extracting at the out-yards. Evidently they do not have a large settling-tank. It is true, many haul their honey home after extracting and put it in a tank. But I do say the man who fills his retail packages from a small tank will never have a first-class article. There will be too much foam and too much wax in it, and, when it reaches the consumer, there is something on the top that is not inviting to look at. A tank will also go a long way in eliminating thin or unripe honey, as it will rise to the top, while the faucet drains off the thick honey from the bottom. I have a tank of five tons capacity, and other tanks, besides. The large tank is one of the greatest of savers.

I haul all my extracting-combs home, and extract the honey and put it in the tank on the upper floor of the honey-house. It holds all I can extract in ten days. I am never bothered with honey overflowing, or being obliged to draw it off before it has all settled. When the honey is in the tank I let it remain as long as it does not candy. When it begins to candy I drain it off. It is a permanent investment. It cost me $35 on board the cars at my station. It is of galvanized steel, and to-day the same tank would cost $50. At that estimate, it amounts to half a cent for each pound of what it holds at one time.

Suppose one is anticipating a flow, and buys cans ahead, how much does it cost him? Not less than three-fourths of a cent per pound, and the cans will be gone when he sells the honey, while the tank will last for 25 or 30 crops. You don't have to store many crops before the tank pays for itself. Don't undertake to extract without a big tank.

In the tons and tons I have shipped and sold there was never a single complaint as to the quality of the honey. Everywhere it goes it is satisfactory, and the customers want more, and for the last two years I have not been able to supply the demand. Why don't they buy from the rest of the bee-keepers? One reason is, many do not produce the quality of honey that I do. They think it requires too much expense to remove the impurities, and that if the honey is candied they have to liquefy it. Honey with granules in it can not be strained, except by gravity.

I was rather late with my extracting this year, and during the last two weeks extracted several thousand pounds that had more or less granules in. One chamber of combs with granules through the honey will so stop the cheese-cloth strainer that nothing will go through. The strainer I ordinarily use is a box set in the top-floor where I extract. Three or four inches from the bottom of the box is a wire-cloth covered with cheese-cloth. The honey, after going through this, passes out through a spout to the next floor below. When extracting combs that are slightly granulated, I have another box between the extractor and the tanks, divided into two compartments, one large where the honey flows in, the other an inch wide, and extending from the top to about an inch from the bottom with an overflow spout on the side opposite from that next to the extractor. With the help of this box I can extract all day long without interruption. The thickest and cleanest honey passes under the partition, and overflows from the top of the small compartment. It requires a box of considerable capacity to do the work; not less than would hold 100 pounds, and 200 or 300 would be better. If the honey were made to pass up and down several times instead of once, it would be more efficacious. So far, I have found that many impurities pass under the partition, and have to be skimmed later from the surface of the big tank. But the great body of chips of comb is left in the gravity strainer. The time the honey remains in the settling-tank depends upon the amount of heat and the thinness of the honey. If the honey is thick, and it is warmed, the impurities separate much more readily.

My tank is supported by a circular wall of stone-work, making a shaft at the bottom of which, in the cellar of the honey-house, is the heating stove. The tank itself is surrounded by a wall of brick at a distance of two or three inches, closed at the top so that the tank is kept enveloped in a volume of hot air. It is surprising how much difference it makes in the handling of honey to heat it. It is almost impossible to draw well-ripened honey through a nozzle an inch to an inch and a quarter in diameter. But when thoroughly warmed by a fire underneath, it runs three or four times faster.

When the honey in the tank is so nearly candied it will not run, if it is warmed and stirred with a stick it will run out as if it were greased. In the multitude of business I once had 800 pounds of honey candied solid in the tank. I did not think the fire below would heat it enough to make it run. My heater is an old range cook-stove enclosed in brick-work. I set that going and put in a heating stove besides, and fired that, and so softened that 800 pounds that I could draw it off. It was not liquid, but candied solid in a very few days.

As to the other end of the subject, the management in the yards, on the hives, I build up in the spring the same as for comb honey. But when it comes to equipment on the hives, I never produce extracted honey without a queen-excluding honey-board. Some say let the queen go anywhere. I don't allow that to influence me. It is economy in time to take off a chamber of extracting-combs and *know* it is all honey. It will cost twice the effort to get the bees out if there is brood. I don't shake the bees off; I smoke as many of the bees down as I can, and then take the chamber off just as it stands—just as I handle comb honey by the super—and set the chambers criss-cross over each other in the yard. They catch the infection of excitement from one another and begin to hustle out. The bees are practically all gone when I load up. I just put the chambers on, perhaps blowing in a little smoke. I have a large covered wagon, bee-tight, with an escape in it. When I load up almost all the bees are out, without having handled a single frame. If I take off the chambers when the bees are robbing I do the same, only I shove them right in the wagon and lock the screen-door. Each time I open the door again a lot of bees fly out, and, besides, there is a bee-escape in the wagon.

Therefore, you don't need to go to handling frames unless you want to, and you don't need to extract in the out-yards. You have to transport the honey in anyhow, and all the additional capital needed is an extra chamber for each hive, and you need that anyway.

Never produce extracted honey with one set of extracting-combs. The extra labor saved will pay for the extra set of combs. When you pay money to a laborer it is gone; but when you put it in extracting chambers and a honey-house it is still your money, and not the other fellow's. Don't stint necessary appliances—tanks, chambers, combs—put money in them at the start; it will pay better than putting a whole lot of work in extracting during the flow. Have enough extras to take the entire crop, and during the flow do nothing but lift off, replace, and take home. There is no business sense in paying out for unskilled help a lot of money that may just as well be in supplies, and, having them, you are ready for a big rush, and out nothing but interest and insurance.

Therefore, equip yourself well with tanks, and do the bulk of the extracting when the flow is over, or nearly so, and by the time the packing is over you have just time to go to the convention and get straightened out for another year; and do as Mr. Hutchinson has been saying for a number of years, "Make it your business, and keep more bees."

R. C. Aikin.

Before the discussion of Mr. Aikin's paper, the president appointed the following committees:

Program—R. C. Aikin, F. Rauchfuss, and Fred Hunt.

Exhibits—W. L. Porter, H. Rauchfuss, B. W. Hopper, Mrs. W. Lindenmeier, Jr., J. C. Carnahan, E. Milleson, Wm. Broadbent, and J. S. Bruce.

Transportation—Arthur Williams (Secretary Chamber of Commerce), H. C. Morehouse, and W. P. Collins.

Legislation—F. Rauchfuss, F. L. Thompson, and Fred Hunt.

H. Rauchfuss—One who has only 12 colonies can not afford to purchase 10,000-pound tank, and yet he can produce a good article without it. He should have sufficient combs to hold the whole crop, and produce no unripe honey. He can store it in cans or barrels, or smaller tanks, and strain and settle it, skim it; then wait until it is cool, not cold, for bottling. It should not be so warm that the stream of honey runs down into the vessel below, dragging small bubbles of air with it, nor so cold that it wavers from side to side, thus enclosing air. By observing these points one can produce a good article on a small scale.

Mr. Gill—I would like Mr. Aikin to extract the honey before it granulates at all. To handle partly granulated combs is a bother from start to finish. You can't get them clean, and they are not in nice shape for winter.

Mr. Garhardt—It would make a great deal of trouble for me to haul my honey home and put it in tanks. I use four thicknesses of cloth, take off the impurity and feed it to the bees again. I indorse the method of producing a pure article. I never have enough to sell because I can't produce enough. But it is very wrong to think of hauling the honey home to extract. It comes out so much easier when it is warm from the hives. I would have no time to do it with my 20 yards to attend to.

Mr. Jouno—How do you keep the bees from robbing when at out-yards?

Mr. Garhardt—There are some certain days when the bees are likely to keep on with their work. On such days I can extract for three hours without being bothered by the bees.

Mr. Aikin—I did not advocate letting the honey remain on until it begins to granulate. But if you let the combs remain until September or October it takes only a few granules to stop the strainer. The first flow of honey goes into the cleanest combs, and can be extracted without a granule, and will be solid in four weeks after extracting, oftentimes in two weeks. Mr. Gill, or any other man, may get caught by stress of work so as not to extract as soon as he would like to. I usually get the combs perfectly clean by wholesale feeding outdoors. I fill a barrel or tank with honey and water made very thin—one gallon of honey to four or five of water—douse the combs in it and hang them in a box, and set it so the bees can get at them. While they are doing that there is no robbing, and hives can be opened the same as in a flow. There is plenty of time when running 20 apiaries to haul the combs home, but you will find you will have to extract many a time when it is not the fit time to do so, if you extract at the out-yards. Any day when you can take off a thousand pounds you will have robbers when extracting, and it is foolishness to take off combs when robbing is going on. You can not take off a big crop and extract it during a honey-flow. I don't expect a large equipment, but I do expect properly ripened and properly clarified honey. Let it stay on the hive until thoroughly ripened, and have your tank deep, and then you may draw it in five-gallon cans. But those producers who find it expedient to do so do not repack it in retail packages. They sell it to their neighbors, or sell it to the trade in 60-pound cans. Every bit of honey that is packed in a retail package should be packed in a retail package in the first place. I have estimated I can sell even more extracted honey than I produce myself, and have hoped to receive honey from my neighbors and pack it, but find that only those who produce on a large scale produce a satisfactory article. In Colorado, bee-keeping is a business. The tendency is to specialize. The man who will not do business on a large scale will not be fitted to do business.

Pres. Harris—The convention should take up the subject of queens. The vital importance of queens should be carefully considered.

(Continued next week.)

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Honey and Rheumatism.

I have read that some people were cured of rheumatism by the stings of bees. I have a customer who is very fond of honey, and as she has the rheumatism badly, and is under the doctor's care, she is advised against eating honey. She was also at a Michigan bathing sanitarium and not allowed to eat honey there. Will Dr. Miller answer this?

Ohio.

Answer.—The fact that some people are cured of rheumatism by means of stings does not necessarily prove that eating honey is good for rheumatism. Honey and bee-poison are two very different things. Yet I have never understood that the use of honey was contraindicated in rheumatic cases. It is possible that in the case in question some particular condition makes it advisable to deny the use of all sweets; but it is safe to say that if they are at all allowed it will be better to use honey than sugar. That able authority, Dr. Kellogg, at the head of one of the most noted sanitariums in the world, endorses the use of honey as being more readily assimilable than sugar.

Questions by a Beginner.

As my health failed me, and my mind was very unsettled, I decided to keep bees, as I thought they would take my attention. I started with 5 colonies to winter, and bought 13 more in May, 1903. They were in 8-frame hives. I made extra stories, put 7 frames in the top story; and I also made 16 new 10-frame hives, thinking the 8-frame hives were not large enough. I extracted 800 pounds of honey from 13 colonies.

1. Which are the best, the 8 or the 10 frame hives?

2. I did not extract any buckwheat honey in the fall; I left the supers on. Would it have been better to have taken them off?

3. When is the best time to put them on in the spring?

4. When do you put the top stories on?

5. How do you find the queen in the case of a weak swarm which you wish to put back in the hive?

6. How do you tell when the colony has no queen?

7. How do you introduce a queen into a queeenless colony?

8. How do you avoid swarming?

9. When is the time to extract? New York.

Answers.—1. After living with you for a year I might give a better guess as to which is best for you. Without so long a sojourn I'm pretty safe in saying you would better have the larger hives if you're working for extracted honey. For comb honey the large hives are also better, unless you give the business close and careful attention. It is lighter work, however, handling smaller hives, and in some cases that is an import matter.

2. Unless the brood-chamber was well filled with stores it was well enough to leave some honey above. But you might have the supers taken off the hives and put some of their combs of sealed honey in the brood-chamber.

3. A good time to take out of cellar is when you see the red maples in bloom, or as soon thereafter as weather seems fairly settled.

4. Put on the extracting-super as soon as you see bits of white wax daubed on the sides of the top-bars or on the upper part of the combs. If white clover is your first source of surplus, put on supers when you see the very first clover bloom. Better give supers a week too soon than a day too late.

5. One way is to put excluder-zinc at the hive-entrance.

allow the swarm to enter, and watch for the queen on the zinc.

6. Look for eggs or unsealed brood. If you find none, and it is at a time when the other colonies have plenty, give a frame of young brood and if no queen-cells are started you may guess that a young queen is present but not yet laying. If queens-cells are started the likelihood is that no queen is in the hive.

7. Put the queen in a provisioned queen-cage, and let the bees free her.

8. As you are working for extracted honey, you may do a good deal toward it by giving abundance of room.

9. Extract any time when a comb is sealed or nearly sealed. When the white-honey harvest is over and a flow of dark honey coming on, extract all the white honey before the dark gets mixed in.

You ought to get a bee-book. That advice ought to be worth five dollars at least to you; but seeing it's you I'll give it to you free. If half of those 18 colonies live through, and you get a bee-book this winter, if you will say next fall that it wasn't worth five dollars to you, I'll apologize with my hat off.

Feeding Sugar Candy in Winter.

Is it too late to make candy for colonies that have but little honey left? They seem to be strong with bees. Some of my bees did not store enough honey to last them until spring. MARYLAND.

ANSWER.—No, it's never too late to give candy to a colony that is short. There's many a colony lost from starvation that might be saved by 50 cents worth—yes, in some cases, 10 cents worth of candy.

Hive-Entrances Covered with Snow.

We are having lots of snow in this section of the State, and there is a heavy fall of snow every 2 or 3 nights of the week.

1. Would it do to keep the hive-entrances free from snow?

2. Can too much heat be gotten up in a hive by keeping the entrances shut up by snow? MICHIGAN.

ANSWERS.—1. Yes, it will be all right to keep the entrances clear.

2. There isn't much danger of it with loose snow at the entrance, but it isn't well when the snow becomes water-soaked and freezes up, so that the air can not enter the entrance.

Spreading Brood—Open-Air Feeding—Smoky-Looking Honey.

1. Do you consider the practice of spreading the brood-combs in the early summer, to secure greater brood area, of sufficient advantage to justify the risk?

2. I have quite a lot of ill-flavored honey in excellent white combs. I want to feed it to the bees next spring. The hives being packed, I shall be obliged to feed in the open air. How can I do so without having the combs torn to pieces by the bees?

3. What causes the smoky appearance on combs of sealed honey soon after winter sets in? Does it render the honey unwholesome for food? Can it be removed? If not, how can I prevent it? PENNSYLVANIA.

ANSWERS.—1. In the face of the fact that able men advocate the practice, I dare not condemn it. Yet, in the hands of many, and in most places, it is a safe thing to let it alone. I may say for myself that if I should practice it, it would generally be at a loss. If I should find a colony of bees covering well five combs, with brood only in four, I see no reason why I might not move one of the outer combs into the center, and thus more quickly get five combs filled with brood. But I do not find them in that way. As a rule they have all the brood they can cover, and if any spreading is done, it is pretty sure to mean chilled brood. So I do not practice speading brood. Possibly with a different locality or with different bees, practice might be different.

2. If you have a very large quantity, you may spread it out so that the bees can get to it with the greatest freedom, and if there is plenty of it so there need not be any crowding, there will be little or no tearing of combs. But with a small quantity that will not work at all. A way that is safe in any case is to go to the opposite extreme. Pile up the honey, and leave an entrance large enough for a single bee. If you have a pile with about a hundred sections, then you may leave an entrance at the top and bottom, and if the pile is still larger leave an entrance for each 50 sections, the entrances each large enough for the passage of a single bee, and at different parts of the pile. It is easy to make an entrance at the middle of a pile by shoving one corner of a super to one side, then partly closing the entrance thus made with a piece of tin or otherwise.

3. I don't know. It looks like mould, and may be something after that order. It doesn't seem to do any harm, and I think disappears when warmed up by the presence of bees. Possibly other heat will help it. Keeping honey in a warm, dry place will probably prevent it. If any one can tell us more positively about it I shall be glad.

Shape of Hive in Which Bees Work Best.

When giving bees plenty of room, which way will they work the best, in a wide hive, or a narrow one built up higher? That is, will they work as well in a 10-frame as an 8 frame hive with the same amount of room? MISSOURI.

ANSWER.—Just so far as the bees themselves are concerned, the nearer a hive comes to the globular form the better it will suit them. So a hive measuring the same in height, length, and width would suit them best of all forms of six-sided hives; but there are other considerations having reference to the convenience of the bee-keeper. The old-fashioned straw-skep is no doubt a better dwelling-place for bees than any modern hive, but it would not suit the bee-keeper. You would probably notice no difference in the working of a colony in a hive with 8 or with 10 frames, unless the colony should be too large for the smaller hive.

Prevention of Swarming.

I am anxious to know how you managed your 100 colo- (as you report on page 4) to keep them from swarming. I have a yard of 220 colonies and would like to know a sure plan of precedure to keep from increasing.

In your judgment, what is the best method of keeping bees from swarming, in yards of 100 colonies or more, and run for comb honey exclusively? WISCONSIN.

ANSWER.—I don't know. With me it has been a matter of cutting and trying for years, and I don't feel settled about it yet. Neither, if one were settled about it, would that settle the question for every one else. What works exactly right in one place may work differently elsewhere. What works right for one man in a given place might not work exactly right in the same place for another man. With my present knowledge—I may think differently six months from now—I can give no better answer to your question than this:

Look through the hive every ten days and destroy queen-cells with eggs in them. When a colony is found with cells farther advanced than to contain eggs, or at the most very young larvæ, remove the queen, destroying queen-cells, and ten days later destroy cells and give a young laying queen. With me that colony will need no farther attention; I can't say how it would be with you. If a young queen cannot be given at the end of ten days, the old queen, or another old queen may be given; but in that case watch must be kept for future swarming.

Do you mean that you're going to keep 220 colonies in one yard? I didn't know so many bees were kept on one spot in Wisconsin. Won't you tell us as to your success? How many have you kept in one apiary heretofore, and with what success?

Sectional Hives—Carniolans or Italians.

What do you think of my plan and hive? I am going to the eastern part of this State to engage in the bee-business, having sold out here. The winters are very cold and long, and no bee-weather from the first of November until about the first of April, often getting as cold as 25 degrees below zero, but the summers are very warm. The honey-flow lasts from June 1 until August 15, and the land is not under cultivation to any extent. It is hilly and wild, a good chance to sow sweet clover and other honey-plants; 15 miles to market, 65 miles to Albany. Now, bees do not winter well there on Langstroth frames; if they winter at all they are very little good for surplus. I am thinking of using a sectional hive, each body to measure 13x13½ by 7¾ inches deep, inside measure; it would give about the same comb-surface as the 9¾-inch Langstroth frames for the two sections. I would winter the bees on the two bodies, or more if needed. There are plenty of bees in the woods, as I have cut trees there that had over 300 pounds of honey each. The super would take 21 4¼-inch sections. Would that be surface enough? I do not intend to produce much section honey, mostly chunk and extracted. Would such a hive do for that kind of honey? I can make each section of hive 1 inch deeper—8¾; would it be advisable, or is 7¾ deep enough?

What do you think of me getting Carniolan queens and using to build up with, and then Italianize?

If you do not think my hive would do, what would you advise? I want one size, and one only, as I know what different sizes in one yard mean—vexation.

New York.

Answer.—You are right in saying that frames of different sizes in the same apiary are a "vexation." To some extent also there is always danger of vexation from having a frame of different size from what others are using, and you will do well to do some hard thinking as to whether your own "get up" of hive and frame will be enough better to warrant you in blazing a path of your own.

Do you know that Langstroth frames would not work well for wintering in the cellar? and are you sure that wintering in the cellar is not best in that locality? However, the hive you mention would work all right for chunk or extracted honey, as would also others.

A surface for 21 sections would work well, although rather small.

If you use frames shallow enough to require two stories, you will probably do well not to have them so deep as 8¾ inches.

It would hardly be advisable to build up one kind of bees and then change to another. Start at first with the kind that you think will suit you best

Color of Goldenrod and Aster Honey.

I would suggest with regard to New Hampshire's sample of honey (page 10), that it might be wild-aster honey. Such honey is water-white and of good flavor. My bees, in September, carried in much of such honey. It was the first that I had ever had, that I am aware of. I have kept bees only since 1896. This past fall the wild aster in this section bloomed in great profusion, even after the first light frost, and the bees worked on it as they do on buckwheat.

Missouri.

This is something new to me. I have always had the impression that asters, goldenrod, and most other fall flowers gave dark honey. Asters and goldenrod are plentiful here, but the bees seem to pay little attention to them, so I have not had any chance to become familiar with honey of that kind.

Horizontal Hive for Out-Apiary and Extracted Honey.

Although I have handled bees as a side-line for a number of years, with varied results, I am comparatively a tender-foot. I use 8-frame dovetail hives, and work for comb honey, but my bees have increased beyond the requisite number to hold in one apiary, and obtain best results, and wishing to start an out-apiary, run for extracted honey, with the least possible increase and attendance, and having seen a plan suggested in an eastern farm journal, and wishing to consult some person with more experience than myself, I submit said plan for your consideration and comment. It is as follows:

Hive-bodies to hold 20 brood-frames, running crosswise of the body, the frames and bees being transferred from the old hive to the new, and closed up behind with followers until the honey-flow, when the extra space is filled with combs or foundation. Only one story is used—no tiering up. Do you think such plan practical to attain desired results? If so, when would you advise transferring and moving? Any other suggestion or plan you might think better will be highly appreciated.

Iowa.

Answer.—A horizontal hive, such as you mention, is somewhat largely used in Europe, and to a limited extent in this country, where it is called the Long Ideal hive. O. O. Poppleton, one of the successful veterans, after many years' experience with them, is a strong advocate of such hives. Whether you would like them as well as 8 or 10 frame hives, tiered up to make the same capacity, is a question not easily determined without actual trial. Your wise course would be not to try more than two or three of them the first year. It will be most convenient for you to move colonies to the new apiary in the 8-frame hives, transferring the frames into the larger hives as soon as the 8-frames begin to seem in danger of being crowded. Then, trying them side by side, you can better determine whether it will suit you best to use a hive containing 20 frames, or 8-frame hives three stories high. If you expect to do much moving of colonies, you must figure on the difficulties of moving such large hives.

Queen-Cages and Introducing Queens.

1. On page 248 of your "Forty Years Among the Bees," you say, under substituting queen-cells—the first thing is to provisions a number of queen-cages with the usual queen-candy, tacking a piece of pasteboard on the end of the plug. Is not this candy intended for the bees to liberate the queen when she is out of the cell by gnawing out this candy? If this is the case, then what is the pasteboard for?

2. Do you put the cell in the cage any way just so the lower end is free, or do you use care to place it in a certain position?

These question may appear somewhat out of season, but I am beginning to get things ready for next season's work and reading up on queen-rearing, I find that I do not quite understand you.

Missouri.

Answers.—1. The object of the pasteboard is to make the bees longer in getting into the cage. In most cases it is probably not necessary. Indeed, in many cases it might not be necessary even to have the candy, because for some reason the bees seem less inclined to tear down a cell in a cage than when it is freely exposed on the comb.

2. The cell is put in any way that comes handy, just so the point is clear for the young queen to get out of the cell.

Your questions are altogether timely; for it is a good way to have your plans made in advance. It would have been a great privation to me if all my life I had been deprived of the pleasure of planning in winter what was to be done the following summer.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

MESQUITE—HOLY LAND BEES.

In that remarkable quartette of pictures on page 785, we see a mesquite grove. Isn't it the first view we have had of this remarkable semi-desert shrub? Hardly looks as my fancy would have pictured it.

The three people who are proving to us that Holy Land bees *sometimes* are clever—well, they think they are smart. "Sometimes" is a big word with any race of bees. And such pictures do not prove nearly so much as the general public would infer from them. 'Spects it would be within the limits of possibility to illustrate Punics or Egyptians, or any other hot-footed race, with just such pictures.

HONEY AS CANE-SUGAR ALREADY DIGESTED.

Remarkable sentence of Dr. Kellogg's: "Digestion of cane-sugar converts it into honey, so honey is practically cane-sugar already digested." I would suggest that we do not crow too much over this till we see what the multitude of other authorities say to it. Will they say it's right, or nearly right, or will they hammer it badly?

Much experimenting with my invalid self on this point (with preferences in favor of honey to start with), persistently turns out about like this: Six ounces of honey eaten at one time, or six ounces of granulated sugar eaten at one time—the sugar agrees with my stomach fully as well as the honey, and *harmonizes with other food previously eaten better.* I would be glad if it turned out the other way. Won't do to forget how full—chock-full—the world is of folks who in dealing with a subject in which they are professionally interested, are continually selling a horse to themselves. Page 787.

"GUARDS" OR "SENTINELS" OF THE HIVE.

Yes, the Britisher is clearly wrong in calling the professional guards at the door "scouts;" but he's right about there being such a class. Our English cousins rather delight in getting different terms from those we use. (Or is it we that delight in rejecting terms they have previously established?) At any rate, sometimes they beat us badly; but this time they missed it. "Guards" and "sentinels" are better terms than "pickets," because pickets in war are usually stationed off at a distance, as these are not. While the bee that follows us around endlessly may be a degenerated guard, I almost incline to doubt it—a degenerated robber, more like. Page 787.

MORE GENERATIONS, MORE PROGRESS.

Half-sister to your fortieth grandmother, eh? Mr. Crum certainly gets the "go ahead" part of the old maxim to a remarkable degree, but the "be sure you're right" part seems to be endangered a little. Still, I think his theory of the more generations the more progress, a hopeful one to operate on. If it should be that a certain look of the queen goes with a certain quality of the worker progeny, the apiarist may "catch on" and be guided by that. Page 788.

THOSE BULK-COMB HONEY-FOLKS.

So the bulk-comb folks think they are going to make their boom run clear across the country. Well, let 'em try it; variety is the spice of life; only let 'em refrain from cultivating suspicion, and continually whispering that, "This is the sure way to have genuine honey." Suggestive that no one who gave up sections has gone back to them—but perhaps time enough has not elapsed yet. You remember it took quite a few years for the bicycle boom to "catch cold." Interesting to see that the trade has mostly come down from the biggest cans to small sizes. Well, Homer, if you make section honey "almost disappear," the sad trouble of basswood lumber being all used up will be much mitigated, won't it? We can hope to teach folks to like candied extracted honey; but I don't believe we can ever make them admire nice comb, uncandied itself, but stuck together with candied stuff—and first we know some of the boys will be putting in part glucose! We must scratch, and dig, and bark some more till we conquer the problem of a non-granulating sort of extracted.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Her Bees Did Very Well.

My bees did very well this year, considering the time I had to care for them. I had 9 colonies last spring. I increased to 18 colonies, and took off 1600 pounds of No. 1 white comb honey. I have sold it nearly all at 15 and 16 cents a pound. MRS. M. THOMPSON.

Kane Co., Ill., Dec. 1.

That is a fine report. At 15 cents per pound your honey brought you $26.66 per colony, to say nothing of the increase. I think it is almost a slander on your bees to say they did *very well*. I should call that excellent work.

A Swarming Time With Swarms.

I thought I would let you know what the bees did the past summer. I got from 1 to 3½ 24-pound cases from each colony. They swarmed, and swarmed, and swarmed, until I did not know what to do with them. As I had no more empty hives I doubled them up. Several of the new swarms swarmed. I left the old colonies by the side of the new until the seventh day, then moved them away, then had after-swarms; 2 left for the woods. I did not lose any prime swarms, as I keep my queen's wings clipped.

I love the bees, and love to work with them. I long to hear their hum again. I do not spend all of my time with the bees, as I have other work. This has been a severe winter so far. It has been from 16 to 20 degrees below zero for several days; sleighing is good. The bees have not had a flight since Nov. 15.

I winter my bees on the summer stands without any protection, packed with leaves on top. I have had fair success wintering this way, when they have plenty of stores.

My honey is all sold, and has been for some time. I got from 12½ to 16 cents per pound. I sold some of it in the home market, but the most of it at the house. I could sell more if I had it.

The most I know about bees I have learned from the American Bee Journal. MRS. L. MACK.

St. Joseph Co., Mich., Jan. 6.

Our blessings often come in disguise, so perhaps you did not realize what a blessing it was that you did not have any more hives, and were thus obliged to double up. It is not so much the number of colonies that counts, as the number of bees in a colony. Good, strong colonies are the ones that winter best, and give us the honey.

Sometimes the bees seem to go crazy, and swarm, and swarm, until there is scarcely anything left of them. In such cases it is best to double up until you have colonies of sufficient strength.

A Pastoral Occupation.

As Arcadia would have been imperfect without the sweet pipings of Pan, so pastoral life would be incomplete without the hum of bees. To those who love country life, and the care of bees, how fondly upon the heart fall these lines from Rogers:—

> "Mine be a cot beside the hill;
> A bee-hive's hum shall sooth my ear;
> A willowy brook that turns a mill
> With many a fall shall linger near."

But if this idyllic life be denied to one who loves it, yet a taste of its sweetness may be within reach, for even a small garden, if adorned with trees and flowers, and picturesquely set with bee-hives, has a savor of rusticity.

Like Goldsmith's Mr. Hardcastle, who seized every opportunity to talk about the Duke of Marlborough and Prince Eugene, so the enthusiastic bee-keeper is always fond of talking about bees.

Certainly, bees are a most fascinating subject, and one no more wearies of seeing them enact their same little drama, year after year, than one does of seeing, times without number, the unfolding of old, familiar flowers. Then, too, the many unsolved mysteries of a bee's life give additional fascination, of course, to the study of apiculture, while as regards robber-bees, the deeds of these invaders and of the defenders, are certainly quite as romantic and thrilling as any exploit of feudal times. But the culmination of tragedy is reached when we read of how, in the tropics, ants and wasps sometimes invade hives, kill the workers, and carry off the queen, much in the same manner I fancy, that the Romans must have carried off Thusnelda. What compassion one feels for the fate of those poor little honey-makers and their queen!

Good tenants deserve good landlords, but bees, as well as people, sometimes pay a very high rent for a very poor house. How more worthy of stings than honey is that landlord who gives his bees a miserable home, and how his conscience, at least, must sting him, if in spite of all their disadvantages, his little tenants pay him a surplus far exceeding their rent!

I once visited an apiary which reminded me of the wretched tenement houses found in large cities. Every hive was so weather-beaten and old, that some of them were seemingly falling to pieces. One of them had even no alighting-board.

Another apiary which I beheld, had a hive festooned with spider-webs in every available place, while on the side of one of the hives, a large body of ants were scaling the wall. The owner of these hovels informed me that he had lately hived a swarm in a hive containing dead bees and rubbish, which he had found no time to clean, but that his swarm was now engaged in cleaning out their dwelling. In fact, he gave but little attention to bees, he said, which, indeed, an observer of his apiary could readily believe. What a sin to give these industrious little insects such habitations! What marvel that they did not all take wing and find homes in the friendly hollow of trees!

There is a tradition that ants dislike salt, but I have seen them tripping gaily and nonchalantly over salt that I have scattered about a bee-hive. The best remedy that I have found for keeping ants away from hives, was to anoint the legs of the bee-stand with kerosene, using it, of course, judiciously, so as not to injure the bees.

When one is wearied from housework, or when a listless, tiresome visitor has just ended a call, what a relief and tonic to the nervous system it is to go out among one's bees. Here one beholds cheerful activity, and hears delicious melody. Ah! what pastoral delights are encompassed within a bee-garden, even if perspective and foreground should happen to be small!

In reflecting upon the wonderful lessons that these little creatures teach, of industry, patience, and order, this extract from Swedenborg, in relation to bees, comes as a closing and fitting ending to our sketch:

> "Many other surprising facts are related of these animals; but the fore-mentioned are a sufficient proof that on account of their uses to mankind, they are instructed by a divine influx, through the spiritual world, to model for themselves such a form of government as exists among men on earth, and even among angels in heaven. How plainly must every man of uncorrupted reason perceive that such instincts are not communicated to bees from the natural world! for what virtue is there in the sun of the natural world, to contrive a form of government so exactly corresponding with the celestial?"

Wayne Co., Ind. KATE V. AUSTIN.

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A Good Report—Prospects Good.

The bees did wonders this season. I got nearly 5000 pounds of comb honey from 48 colonies. The flow lasted here from the beginning of June to the first part of August, but the fall crop was lost by too much rain and cool weather. I was more than pleased, as I sold the honey as fast as the bees could produce it.

The outlook for next season is good. White clover will be well preserved if the snow stays on the ground. CHAS. LUEBKE.

Rock Co., Wis., Dec. 21.

Bee-Houses—A Correction.

I notice, on page 30, I am made to say that my bee-houses are open at the top in very warm weather. It should read that the hives open at the top. My bee-houses are shingled with the best shingles I can buy, and have a door at each end to let the air through.

I have taken the American Bee Journal only a few months, but I should have taken it years ago if I had known how good it is.

Linn Co., Mo., Jan. 15. IRVING LONG.

Hasty's Ballads and Texas "Critters."

MR. EDITOR:—If there is any difficulty in filling up the "Old Reliable" with suitable matter during the winter months, when bee-keepers may be supposed to be less "strenuous" than at other times, might I suggest that you get Mr. Hasty to dive into the cavernous recesses of his mind after more ballad? (See page 8.) That little snatch he favored us with was irresistibly droll, and you know "A little nonsense now and then is relished by the best of men." May be it owes something to the application he gave it, as a rather indifferent jewel might gain by a fine setting.

I wonder if the man of H's [H. H. Hyde] will feel called upon to give an exhaustive answer to those questions. Lest he should

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not, let me tell Mr. Hasty that whatever might be the case, if a "critter" of the kind got him (Hasty) in its clutch, the particular lovely vision depicted had none too tight a hold on our Texas brother, otherwise he could not have escaped so soon after the honey-moon to be "one of the boys" on that California trip. Moreover, I, who had opportunity to observe the manner and bearing of the gentleman in question, will give my testimony that it was anything but that of a lovelorn swain.

As to keeping them off, Mr. Hasty, "critters" of that ilk are no doubt much the same in Texas as elsewhere. You might find tobacco-smoke pungent enough to avail somewhat. It ought to be entirely effective, but unfortunately one can not warrant it in all cases. While their natural instinct is against it, constant association blunts the sensibility of the "critters." NEBRASKA.

Bee-Keeping in Southern Georgia.

Bee-keeping here in southern Georgia is mostly on the old-fashioned style—gums made of hollow logs and goods boxes, etc. The strain of bees is blacks, and are so spiteful that some of the gums are never robbed at all.

I have been keeping bees in this style for 15 years. Last year I got all the information I could from bee papers and books, and transferred my apiary of 59 colonies to the 8-frame Langstroth hive. I lost one colony in the operation, increased to 83, reared some queens, bought some, and improved my strain of bees. I got 1550 sections of honey, all No. 1, which I sold at 12½ cents each. And I want to say, I don't want to keep bees in the old-fashioned way any more, although I was successful and had good crops of bulk honey every year, and got 10 cents per pound; and for some I got 12½ cents. One contributor seems to approve of this plan, as it is so cheap, and has gone so far as to count up the expense for several years ahead on the improved method. Yes, and I am figuring ahead, too, but my bees will pay their expenses, which they did this year, and built all their combs from 1-inch starters.

When I started to transferring in the spring, other people, as well as bee-keepers, laughed at me and said I was silly, and my name is still going as a bee-crank.

My comb honey was all sold as fast as I could take it from the hives, but the chunk honey was harder to sell.

I will keep bees on a somewhat larger scale another year, and I am expecting to have a partner or helper.

The "Old Reliable" is a welcome visitor to my home, and I wish it was a daily instead of a weekly (through the winter, anyway). I think I have read every line in every copy since I subscribed. J. J. WILDER.

Dooly Co., Ga., Dec. 10.

Best Season in Many Years.

The best honey season was 1903 since I have kept bees, and I have been at it since the latter part of the '60's. The early part of the season was cold and rainy, so the bees did not do much good—in fact, I had to do a good deal of feeding, and doubled back from 36 to 33 colonies; but after the middle of June the bees went to work in earnest, both in gathering honey and swarming. It was not a very fast flow, but right steady, without any intermission, until near the middle of August, when there was a little let-up for about 10 days or 2 weeks, when they went at it again, and carried in over 1800 pounds more of late honey. My bees increased from 33 colonies to 51, 4 became queenless, and I doubled them back to 47, all in fair condition.

My crop of honey for 1903 is 8360, 437 pounds being in 1-pound sections. If I had been prepared for such a run I could have had 10.000 pounds, easily. I got out of supplies and extracting-combs, and had to let several colonies be idle. One colony with a queen became disgusted with things and swarmed out. I saw them hanging in a tree for an hour or two, but let them go to try their luck elsewhere.

My bees are still on the summer stands; I can not find a suitable day to put them into the cellar. The weather is so gradually get-

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ting cold that they can not get out to have a cleansing flight, and I would not like to take them into the cellar without it; in fact, I like to make the time that they are in the cellar as short as possible. FRED BECHLY.

Poweshiek Co., Iowa, Dec. 20.

Cleaning Extracting-Combs and Unfinished Sections.

As there has been some discussion lately in regard to getting extracting-combs cleaned of honey, I will give my method, which has always been successful with me.

Stack up the supers containing the combs 30 or 40 feet from the hives containing the bees. As soon as a few of the bees have found them, put on covers, and tack a piece of lath over the entrance, in which a couple of notches are cut just large enough for one bee to pass in or out at a time. *Don't put any combs out until you have finished taking off the honey*, so you will not have to open the hives while the bees are working at the combs. Put the first lot of combs out a little before sundown.

For getting partly-filled sections cleaned of honey, make two frames of lath just large enough to hold 8 sections each. Stretch wire across one side of the frames to prevent the sections from falling through. Fill the frames and extract. After the bees have worked a day or two on the piles of extracting-combs, place one or two supers filled with sections on top of each pile of extracting-combs. The bees will not tear the combs as they will if the sections are placed in a pile by themselves. If you avoid opening hives while the bees are cleaning the combs, no robbing will occur. D. I. WAGAR.

Wayne Co., Mich., Dec. 22.

Swarms Settling in the Same Place.

Permit me to record an observation in reference to swarming habits. It may be useful to those situated like myself, within the confines of a few city lots. Of course, clipping the queen's wings settles the problem instantly; hence it is for those who work their apiary otherwise.

Fifty percent of my swarms alighted on the same branch last spring. I generally left them clustered some time, owing to the pressure of official work. I imagined that gave the bees time to do some little work preparatory to comb-building, and, consequently, left the branch on which they clustered permeated with the odor of honey. How would it be if one were to daub a branch or two in their yard with honey? Would it tempt the flying queen to alight? What think you is the explanation of so many of my swarms alighting on the same branch? I do not think it due to the convenience of location. Has any one a like experience to mine?

E. D. RUSSELL, M. D.

Webster Co., Iowa, Jan. 12.

Alfalfa and Sweet Clover—An Entrance Regulator.

As the bee-season is over it seems to be in order to report our success, be it great or small. I have done very good business this year, and while I have not produced the usual amount of honey I have increased to a large number of colonies, and should they winter well I shall be kept very busy the coming season. The bees have gone into winter quarters in fine shape.

I am located in a basin of some 2000 acres in the foothills of Grand Mesa. The land is all in alfalfa, and all along the irrigating ditches are immense bodies of sweet clover, that lasts long after the hay is all cut and stacked. Talk about sweet clover being a noxious weed! Why, the stock in the large pastures eat it off while it is young and tender, until it scarcely gets into bloom, and I don't understand why a certain class of people are so opposed to sweet clover. It is very easy to kill it out in hay land. In cutting 3 crops of hay it never ripens any seed, and so cannot do any damage to hay; it is only in waste-places that it flourishes, and I certainly think all this talk on the subject will soon be dropped.

I see that one correspondent would like a

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hive-entrance that could be closed to suit conditions. Now I have adopted a plan of my own. I take a 2-inch crate-staple, drive it up and down the edge of the sides of the body of the hive, commencing at the side of the entrance and extend up 2 inches. Suppose you have an entrance of one inch, now take a thin strip of board ¼ inch and 1 inch wide, slip it through the staples from the side, the same as a bar, and drive the staple up against the 1-inch strip so that it binds slightly. You can raise the slat at will and have any size entrance from 1 inch to close up, which for moving bees a short distance is very handy, and I could not think of dropping this feature after once using it.

The old American Bee Journal is getting to be one of the most able bee-papers extant, always containing something new and entertaining. W. H. Beverlin.

Delta Co., Colo., Dec. 15.

Chunk Honey Sells Best.

I have been keeping bees part of the time, and a part of the time the bees have been keeping me, for over 30 years. This has been one of the best seasons we ever had in this country. Chunk honey sells here better than section honey. I have tried nearly all sizes of hives, and the 8-frame is the best for this locality, as a larger size affords but little surplus. M. R. Lyle.

Bates Co., Mo., Dec. 22.

Perforated Separators—Trowel for Trimming Top-Bars.

I notice in the American Bee Journal that A. F. Foote has been trying separators with holes in them. I have tried them and like the plan, only I do not make the holes as large as a 16-guage wad-cutter. About ⅜ inch is the size I used, some with one hole for each section and some with 5 holes to the section. I had no trouble with the bees building the combs to the separators; all were nice and straight.

Did any one ever try a plastering-trowel to cut the combs off the tops of the brood-frames? Just try one and see how it works. H. W. Keith.

Greene Co., Mo., Dec. 14.

Wintering Bees on Sugar Candy.

On page 924, some bee-keeper from Iowa doubts the advisability of feeding candy, made of sugar and water, to bees in cold weather, and wants to know whether from personal experience such candy can be made to do as some say it will. Let me answer this question from actual experience.

Four years ago, late in the fall, in Cass Co., Mo., I discovered several colonies of bees in almost destitute condition, not having over 5 pounds of honey each, and the weather was too cold to feed syrup; I began to think I had acted very unwisely in not observing closer, but concluded to make the best I could out of a bad job.

Having several copies of the Busy Bee on hand, I began to search very diligently for a remedy, and found the candy remedy. I at once procured the sugar, and very carefully went to work for results. I used a small 2-burner gasoline stove to do the cooking, as I could regulate the heat to suit me. I made cakes of candy for each colony, weighing from 8 to 10 pounds. When the candy was cooled and caked it looked like rock candy, very hard and clear, as though a bee could never do anything with it. But I went ahead, as directed, and right over the cluster I laid 3 flat pine sticks, ½-inch wide and 7 inches long, crosswise of the brood-frames, and upon those pine sticks I laid the cake of candy, and placed an empty super on the hive. I then filled the super with burlap, tucking down close to the edges, so no cold could enter from the sides or ends of the hive, put a little weight on the cloth, so it would settle down close, put on the cover, and let them go.

Every one so treated wintered finely, without loss, some of the candy remaining until fruit-bloom the next spring; others use every particle of the sugar given them.

In my experience with sugar candy the

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Some Good Clubbing Offers.

A good many subscriptions to the American Bee Journal should be renewed at once. We wish to call special attention to the following, which we are sure will commend themselves to many of our readers:

No. 1—	The Bee Journal and Dr. Miller's "Forty Years Among the Bees" (book alone, $1.00)	Both for $1.75
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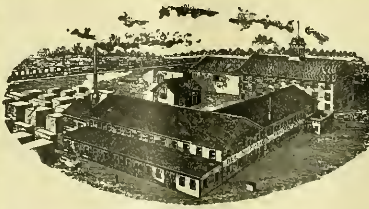

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secret lies in the making of the candy. If you are in too great a hurry you would better postpone the making until you get control of your patience, because if you scorch the candy the least bit it is not fit for bees, and is almost sure death to them. So I wish to say that the recipe, in a time of scarcity of honey, is a valuable one, if the proper precaution is taken for the preparation. I don't know whether Mr. Abbott is the originator of the recipe or not, but let him be who he may, he has conferred a great favor on the bee-keeping fraternity, if they will be cautious in its preparation, not to scorch or burn in the least. As for myself, if I could prepare the candy myself, I can winter a colony on the verge of starvation. I know it is all right, if properly done. J. B. AUSMUS.

Benton Co., Ark., Dec. 26.

Appreciates the Bee-Papers.

My duties in the railway office compel me to work with my bees mornings and evenings, and I find it very pleasant and healthful, as well as a remunerative recreation. I have been very successful, so far, and I feel that it is mostly due to the reading of the "Old Reliable" and other bee-papers. I could not get along without reading such papers, if they cost me five times as much as they do now. GEO. H. REA.

Jefferson Co., Pa., Dec. 24.

Wired Combs from Starters.

Dr. C. C. Miller, in reply to "Virginia" on page 795, says: "No, you cannot be sure that the bees will build the septum directly on the wire." Virginia had asked if it would tend to insure strong, well-built combs to wire frames when only starters were given. My experience would lead me to advise the wires, for it is very rarely, with me, that the bees fail to build the septum on the wires, and I always wire frames, even with half-inch starters. I find two parallel wires sufficient, and it is difficult in most cases to distinguish combs from starters and those from full sheets of foundation. I am not, however, an advocate of starters. I prefer full sheets, as a rule. C. S. HARRIS.

Volusia Co., Fla.

Moths Don't Come from Butterflies.

I would like to point out a glaring error in a letter signed "Nebraska Subscriber," appearing on page 797. He is talking about the moth—Galleria cerella—and says: "One of the bee-keepers wanted to know what made the moth. It is the butterflies," etc.; and further on he adds; "I kept all the butterflies killed off this summer and am bothered no more."

I would like to point out that a butterfly and a moth are quite separate and distinct insects, as much as any two different species of birds, say a robin and a whip-poor-will! Therefore he might kill every butterfly in Nebraska, and not be doing the moth one particle of harm.

Butterflies and moths are two groups of insects which together form the order Lepidoptera. All butterflies are diurnal in their flight, while moths with many exceptions are crepuscular or nocturnal. The antennæ of all butterflies agree in having their ends "knobbed" or "clubbed," hence the name for them, Rhopalocera; while the antennæ of moths are *in no case* ever knobbed or clubbed, but may be prismatic, serrate, pectinate, moniliform, or filiform, and owing to this variety of antennæ moths have been termed Heterecera.

In butterflies the antennæ are straight, and stand out rigidly in front of the head, while in moths they are usually curved and can generally be folded back on the body. There are 5 main groups or families of butterflies, viz. Papilionidæ, Nymphalidæ, Erycinidæ, Lycaenidæ, and Hesperiidæ. While moths are roughly divided into Sphingidæ, Bombycidæ, Noctuidæ, Geometridæ, Pyralidæ, Tortricidæ, and Pterophoridæ.

It would be quite impossible for any butterfly to lay an egg that would produce any kind of moth, quite as impossible as for a queen-bee to lay an egg that would produce a hornet or a yellow-jacket.

The correspondent is also mistaken in thinking that eggs are deposited on the bees, as no bee would suffer any moth to take such a liberty with her. It is a great deal more likely that the bees take the eggs into the hives with their loads of pollen, as I have often seen the moths hovering around any bloom that bees frequent, and it is most likely that they lay their eggs on those plants, and the bees may accidentally gather some of them with the pollen.

The remedy for moth is: Keep nothing but pure Italian bees, and you will never be troubled with them any more.

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Augusta Co., Va., Dec. 17.

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What ought to be the difference between one yard and two yards? Page 16 bar Garden Fence.
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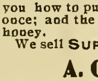

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A Beginner's Report.

The "Old Reliable" is a fine paper. I would not like to be without it for twice its price. I am just getting a start with bees. I bought a colony in August, 1902, transferred them on full sheets of foundation, and fed them sugar syrup the first of September. They came through the winter in fine shape. From the one colony, spring count, 1903, I got 3 good swarms, and from the first 2 swarms and parent colony I got 75 pounds of surplus honey, and all went into winter quarters with plenty of stores.

I winter my bees on the summer stands, with cushion frames on each side of the cluster, also a cushion on top, and plenty of outside protection. O. C. HOTZE.

Monroe Co., Ind., Jan. 3.

A Swarm on a Hat.

During the swarming season of 1903, I had a swarm come out and alight on my hat that I was wearing. My assistant gave me another hat, so all I had to do was to take my hat off and shake it in front of a hive.

My crop of honey was very good for last year.

I had 25 colonies, spring count; increased to 35. H. GIBSON.

Ontario, Canada, Jan. 11.

A Good Report for 1903.

This is my third year in the business, I had 38 colonies of bees last spring, built up to 84, and had 4210 sections of honey to ship. I shipped 1912 sections to North Dakota, and 464 sections to Nebraska, and sold at home 1454 sections, and the balance I still have. The honey shipped brought me 12½ cents per section, clear of freight and crates. Honey is very plentiful here; this is the best year in the history of the State for bees and honey. There were bees everywhere. I could have built up to 200 colonies if I had wanted to out of 37 colonies. I put from one to five in a hive, and had to put on supers and let the bees up in them to give them room to work. I got as high as 150 sections off some of the early swarms.

I put the bees in the cellar Dec. 4 in fair shape, and hope they will come out in the spring in good order; and that next year may be a good one for honey, and not so many swarms. E. B. PRITCHETT.

Warren Co., Iowa, Dec. 26.

A Discouraging Season.

The past season has been a very discouraging one to western Nevada bee-keepers. Prospects were never better in the early part of the season. A heavy frost on Sept. 5 completely killed off all nectar-producing flora, consequently the second crop of alfalfa produced no honey — "Nevada's honey-producer." Prices also slumped; all the bee-keepers of this locality sold for 8 and 7 cents, respectively—No. 1 and No. 2 comb honey—and 4 cents for extracted, with the exception of three of us, who managed to get 11 and 9 cents for comb honey. The crop was of excellent quality and grade when well handled.

I am thinking seriously of going out of the business. High prices on bee-keepers' supplies, to say nothing of long-distance freight-rates and steals, and depreciating values of honey, makes it discouraging, to say the least. Farm laborers to-day, in Nevada, can save more than the average bee-keeper with his 200 or 300 colonies run to their utmost capacity.

Bees are wintering finely up to this date. Hardly a day, so far, that the bees could not take a flight. Rather cold nights, but not serious.

What has happened to Yon Yonson? He must be off sleighing or skating; perhaps digging a bee-cellar. About time he was bobbing up again. I guess he got mixed up with "Central" over his pumpkin crop. Come again, Yonson. SAGEBRUSH.
Washoe Co., Nevada, Jan. 4.

["Yon" will soon be on hand again. It is not his fault that he has not been heard from lately.—EDITOR.]

A Good Year for Swarming.

I started last spring with 54 colonies of bees. We had very warm weather in March, and it was cool and dry during April and until about May 7, but from that time on we had plenty of rain all the rest of the summer and fall. I got about 3800 pounds of honey, some of the nicest I ever saw; only a little buckwheat honey.

It was a good year for swarming. I did not care for any increase so I tried to prevent it. My first swarm came out June 27, and then after that for 3 weeks they would swarm any way if it did look like rain. I had a swarm come out when it was raining hard. I have a home market for my extracted honey, but ship some of my comb honey to commission merchants.

I started in the winter with 70 colonies; I winter them on the summer stands. There has not been a day they could fly since Nov. 13; we have had steady cold weather up to this date. C. F. BAKER.
Allegany Co., N. Y., Dec. 30.

Honey All Sold Out.

Bees are doing well up to this date, and all have plenty of stores. Honey is in good demand, selling for 5½ cents wholesale here at home, and none to be had at that. No snow in the mountains at the present for irrigation for another year. We can't tell what may come before the first of next June.
G. W. VANGUNDY.
Uinta Co., Utah, Dec. 29.

Bees Did Well.

I am in love with bees as much as ever. I had 14 colonies to start with in the spring, which I transferred into new hives, but found the combs in very poor condition. I could use only about one-third, and the rest had to be built new. Taking all into consideration, I think they did fairly, for they increased to 20 colonies (all in first-class condition), and stored about 1000 pounds of fine comb honey. I will be ready for business the coming season.

I have been trying to get subscribers for the American Bee Journal, but have not succeeded so far. I have neighbors who are keeping from 5 to 20 colonies, some getting a little honey and others nothing at all. I asked my next-door friend how much honey he got from his 10 colonies; he said, "25 pounds." I told him the only way to succeed is to take a bee-paper and study. But most of them, rather than pay out a dollar, go without it, and lose more than a hundred by it. I would not think of keeping bees without any bee-literature. WM. MILLER.
Yakima Co., Wash., Dec. 31.

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This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

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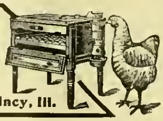

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CONVENTION NOTICES.

Utah.—The spring convention of the Utah Bee-Keepers' Association will be held April 5, at 10 a.m. and 4:30 p.m. Among other important questions to be considered will be the World's Fair, our State Fair, and the Portland Fair of 1905. We also desire to formulate some plan, if possible, to further increase the fraternal interest for the mutual benefit of our bee-keepers. We cordially invite all bee-keepers to be present. We also invite them without delay to send in their views on these and other topics. The convention will be held in the City and County building, in Salt Lake City.
Salt Lake City, Utah. E. S. LOVESY, Pres.

Wisconsin.—The annual convention of the Wisconsin State Bee-Keepers' Association will be held in the Capitol, at Madison, on Wednesday and Thursday, Feb. 3 and 4, beginning at 10 a.m., Wednesday. We are and have been doing our utmost to make this the most enthusiastic convention ever held in the State, and a most complete and interesting program will be presented. We are at this time assured of 8 papers on interesting subjects, by prominent bee-keepers, among them George W. York, W. Z. Hutchinson, and of course President and General Manager France. A free to all question-box will also be a part of the program. We urgently invite all who are not members, to participate with us; it will pay you in every way—in fact the social part alone is worth it. Come and get acquainted with our visitors and the bee keepers of the State. Reduced rates will be given by the hotels, and the railroad fare will be 1⅓ for the round trip. Just ask your agent for a 1⅓ fare round-trip ticket. It will save lots of time if members, and all those wishing to become such, will remit their annual dues to me prior to the convention. The dues are $1.00, which also makes you a member of the National Association. Exhibits of honey are solicited, and suitable premiums will be awarded. GUS DITTMER, Sec.
Augusta, Wis.

A Wintering Experience.

My bees were neglected a good deal this year, for I was too busy to give them the proper attention, but I got a small surplus—385 sections and 36 frames of honey, by using double hive-bodies, from 13 colonies, spring count. Last winter I wintered my bees on the summer stands, one-half facing south, and banked up and over the top, and packed between with straw held in place by boards, the hives one foot apart. Now, in this half so packed I lost 5 colonies; they had plenty of stores, all the dead colonies having from 2 to 4 frames of honey. Now, the other half was a trifle more exposed to the weather, and were not banked up excepting when there was snow, then I shoveled snow up and around them, and these came out without a single loss; these latter faced east.

This year I have 16 colonies in the cellar, and 3 double-deckers out-doors. Those out-of-doors are pretty "hot ones," and I don't think it possible for a little cold weather of 30 or 40 degrees below zero to cool them down. Anyway, they have over 100 pounds of honey each, and from my experience with them I believe them perfectly able to protect it. One of those outside colonies is the colony I took from that bee-tree I wrote about three years ago. I have never taken a pound of surplus honey from this colony, or captured a swarm that issued, so I have concluded that where a colony has been in the timber in a wild state, as this one was (it had been in the tree for at least four years), they are predisposed to abscond; at least my experience with this one has so proven to me; and next spring, if nothing happens, this queen will attend a "pinching bee." LEWIS LAMKIN.
Woodbury Co., Iowa, Jan. 11.

No Rain in Southern California.

To date, Southern California has had no rain. Heavy rains in Northern California did not reach us at all, so that now all are alarmed at the prospect, and have about given up hope for any honey in 1904.

We have over 500 colonies of bees, and fortunately have a car-load or so of honey to feed back. G. F. MERRIAM & SON.
San Diego Co., Calif., Dec. 31.

Good Season for Bees.

I commenced the season with 50 colonies of bees in fair condition, and fed one barrel of sugar in the spring before the honey-flow commenced. The bees commenced gathering about May 20, and gathered enough for brood-rearing, and that continued until June 28, when the real honey-flow from the linden began, and my crop from that source was about 2000 pounds of fine white extracted honey. Then the flow was slow again until the first of September, when the asters and goldenrods, of many varieties, commenced to yield another real harvest for the bees. So ended the season with bees in good shape for winter. I have about 80 colonies in all, and 3000 pounds of surplus honey. A. J. MCBRIDE.
Watauga Co., N. C.

Season of 1904—Selling Honey.

I had 10 colonies, spring count, and on Sept. 10, 1903, I had taken off and sold 2030 of the finest one-pound sections of comb honey I ever got; also 360 pounds of extracted honey—poor sections mashed and pressed. I have also on hand about 25 pounds of extracted honey for home use, and about 23 pounds of wax. I am not kicking, although I had to do some hustling in June and July.

My best record was from a prime swarm hived June 4, and it gave me 219 pounds of fine section honey. That queen will be my breeder this year.

My bees are all snugly packed in leaves on the summer stands, and all were out very thick on Dec. 31.

Some may wonder how I got rid of my honey so quickly. I have taken great pleasure in reading in the "Old Reliable" about how to peddle honey, but as I am situated I can not go peddling, so I hit on a way of my own—and it worked.

I am located near a power-plant, which is 2½ miles up the beautiful Iowa river, and the same from Iowa City (State University), and every fine Sunday there are crowds up to our dam, boat-riding (also week days), and nearly all take a rest and visit our electric plant. Here is where I got my chance, and every Sunday I always aimed to have two nice supers of honey all cleaned up, and one super just as it came off the hive, on my long bench near a good window. Of course, I always had nice, clean paper on the bench. Saturday would tie up about 30 to 50 nice sections ready for my "flies" on Sunday. (Naughty, did you say?) Well, I can not tell you how people admire fine honey, and the questions they ask; some would ask if the bees made it, and others would ask whether it was good to eat. Taking up one of my "fly baits," I would give it to a lady, tell her to try it and let me know next time she was up how it tasted. There is where my trouble began, for after my first "baiting," I could not keep up with my orders, for they would come out in buggies and get their honey—for it was honey this year. I could have sold twice my crop. I will not have to give "baits" away in 1904, for I have plenty of standing orders for 1904—if we get any honey.

The record for 1904 is one I am not ashamed of, considering the other work I did during the biggest honey-flow we have had here for 18 years, to my knowledge.

I have read lots of bee-books during my life (44 years), but the book I think the most of (and laugh the most when reading it), is a little paper-covered book by Richard Smith, and published at Oxford, England (my home), in 1839. It is about 36 years ago since the old bee-keeper gave me the book, and if he could only see how we handle bees to-day, he would think that in his day they knew very little.
JOHN T. PAINTIN.
Johnson Co., Iowa, Jan. 2.

Results of the Season.

My crop was about 48 pounds per colony this year, all comb honey, which I sold for 20 cents a pound, all in one-pound sections.
C. S. GUERNSEY.
Litchfield Co., Conn., Dec. 28.

Fear They Won't Winter Well.

My bees are snugly packed away on the summer stands, and I am hoping they will come through the winter all right; but I am somewhat fearful they will not, for while they had plenty of stores they were short on bees.
G. T. WILLIS.
Vermillion Co., Ill., Dec. 30.

Bees Wintering Well so Far.

So far my bees have wintered well. During the latter part of the month of November they had good flights on 3 days. In December, up to the 16th, it was too cold for the bees to be out, but in the last 2 weeks we have had 8 days that the bees could fly, and on 3 days the thermometer went up to 56 degrees, F., in the shade, including Dec. 30 and 31. We have had very little snow, and the lowest point reached was 6 degrees above zero.
WM. STOLLEY.
Hall Co., Nebr., Dec. 31.

An Old Bee-Keeper.

I have been keeping bees ever since 1855, with intermixture of success and failure. I now have about 55 colonies in the cellar, I think in pretty fair condition. Their contented, low hum, when I made them a visit seem to say, "All is well." I am past 85 years old, but I enjoy working with the bees yet.
N. SANDERS.
Henry Co., Ind., Dec. 31.

A Beginner's Experience.

In January, 1903, I bought some bees, brought them home, and piled the hives on top of each other on the south porch—a good, warm place. They had a flight, and then the weather turned cold—18 degrees below zero—and I thought I would bring the bees into the house (bee-room, adjoining room with fire) until the cold snap was over. The entrances were screened, and we went away from home one day, and some one (my wife) forgot and left the door open, and they got warmed up, and a whole raft of them got out some way, and when we arrived home the bees were everywhere. To prevent domestic trouble I put them outside again, and did not put them in the same place where they were before, and when they flew again they mixed up and fought, and the next morning I found 4 queens kicked out of the entrances. Later on they commenced to get too friendly (?). I set them a rod or so in front of the porch, and when they flew back they came, and come they did, right under the door in the house. I set some of them back on the porch to save them, and how they fought and came in under and around the door—trouble is no name for it. I sat out by those queenless colonies and knocked robbers on the head, waiting for the queens I had sent for to come (in place of uniting, as I should), and how they would come dead; but the robbers wouldn't come that way a bit.

But the strangest part is, that with all this discouragement and loss I don't get discouraged and quit. I believe I would in some other line of business.
A. B. TACKABERRY.
Van Buren Co., Iowa, Dec. 22.

A Profitable Season.

This has been a very profitable season for bee-keepers in this locality. The prospect is not so good as last season, still we can't tell; there seems to be considerable white clover left for next season. The average amount of honey sold, per colony, spring count, for 1903, was about $9 or $10, besides some for home use.
JACOB SEIBOLD.
Champaign Co., Ill., Dec. 19.

Poor Honey-Year—Swarming.

We have had a very poor year for honey. I had 7 colonies in the spring; I shook one and lost it, one of my best, too. I quit shaking then and increased to 18 by dividing, and got perhaps 100 pounds of nice honey in small frames, but no sections were finished. Some of my colonies are very small, but are doing well. I examined them Dec. 24. We have had an exceedingly dry, cold fall and winter so far, still the bees seem to be in better shape than usual.

I wish some advice. We have peculiar conditions here to deal with. Our best and shortest honey-flow is from the poplars; they begin to bloom usually about April 15 to 25, and last say 3 weeks. This crop is a very certain one, too. I never knew them all to be killed by frost but once since I can remember, which is over 40 years. This poplar honey is our finest honey; very thick and rich, but the trouble is, the bees are in the midst of their swarming fever right at the very time they are most needed for this flow. We have swarms here as early as March 20, sometimes. If any one can tell me how I can keep my bees from swarming until after this early and valuable flow, he will do me a great favor.
P. T. LEMASTER.
Spartanburg Co., S. C., Dec. 31.

Wanted To buy **FANCY COMB HONEY** in no-drip cases; also amber Extracted in barrels; spot cash
C. M. SCOTT & CO.
1004 E. Wash. Street, INDIANAPOLIS, IND.
1Atf Please mention the Bee Journal.

WANTED—**Comb Honey** in quantity lots. We are perhaps the only dealers in this article owning as much as 150,000 pounds at one time. Please state quantity, quality and price asked for your offerings. **Thos. C. Stanley & Son,**
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HONEY AND BEESWAX
MARKET QUOTATIONS

CHICAGO, Jan. 8.—The new year opens with a quiet trade in honey, retailers having usually a supply from the stock laid in to make a good show at the holiday time. Prices are without essential change in No. 1 to fancy comb, which brings about 13c; very little doing in off grades at from 1@3c less. Extracted, white grades, bring from 6@7c, according to flavor and other qualities; ambers about 1c less; especially weak are those lacking in flavor and body. Beeswax steady at 28@30c.
R. A. BURNETT & CO.

CINCINNATI, Jan. 8.—The market on comb honey has weakened, as the supply has been larger than the demand. Fancy water-white, 14c; off grades, lower. Extracted, amber, in barrels, 5¼@5¾c; in 60-lb. cans, ½c more; alfalfa, water-white, 6@6½c; fancy white clover, 7@8c. Beeswax, good demand; 30c for nice.
C. H. W. WEBER.

PHILADELPHIA, Jan. 13.—There has been very little call for honey since the holidays. The first two weeks of the year are the dullest during the season; people become somewhat surfeited with sweets, lessening the demand. The market is somewhat weaker, with quite a few arrivals. We quote fancy comb at 15@16c; No. 1, 13@14c; amber, 12c. Extracted, white, 7½@8c; amber, 6@7c. Beeswax, 31c. We are producers of honey and do not handle on commission.
WM. A. SELSER.

ALBANY, N. Y., Jan. 15.—Honey mrket extremely dull since the holidays and cold weather. Quotations are nominal, and asking prices mostly. We are quoting 15c for fancy white; 14c for A No. 1; 12@13c for dark and mixed, but would shade these prices now rather than lose sales. Extracted, inquiry improving somewhat, especially on the buckwheat and darker grades.
H. R. WRIGHT.

CINCINNATI, Nov. 20.—The demand for comb honey is slower now than it was six weeks ago, owing to the enormous quantities offered on all sides. Fancy comb is sold in single case lots at 14c. The supply of extracted honey is big, although the demand is good. We are selling amber extracted in barrels at 5¾@6½c. White clover, in barrels and cans, 7½@8½c, according to quality. Beeswax, 30c.
THE FRED W. MUTH CO.

BOSTON, Dec. 21.—The demand for honey continues good, with an ample supply of comb, and a light supply of extracted. We quote our market as follows: Fancy white comb, 16@17c; No. 1, 14@15c; and practically no No. 2 to offer. Extracted, 7@8c, as to quality.
BLAKE, SCOTT & LEE.

KANSAS CITY, Dec. 30.—Instead of our honey market improving, it has grown worse as far as comb is concerned. The receipts have increased and fancy comb and No. 1 have been sold as low as $2.50 per case of 24 sections. We do not look for any improvement in prices before February, if then. We quote: Fancy white comb, 24 section cases, $2.60; No. 1, $2.50; No. 2, $2.40. Extracted, white, per lb., 7@7½c; amber, 6@6½c. Beeswax, 25@28c.
C. C. CLEMONS & CO.

NEW YORK, Dec. 4.—Comb honey is arriving in sufficient quantities to supply the demand, and, as to the quality, most of the white honey seems to be off color, more or less. We quote fancy white at 14c; No. 1 at 13c; amber, 11@12c; and buckwheat, 10c. Extracted, light amber, at 6c; white, 6½c; Southern, 55@60c per gallon; buckwheat, 5½c. Beeswax, 28@29c.
HILDRETH & SEGELKEN.

SAN FRANCISCO, Jan. 6.—White comb, 1-lb. frames, 13@14 cents; amber, 9@11c. Extracted, white, 5½@6c; light amber, 4½@5c; amber, 4@4½c; dark amber, 3½@4c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

Spot stocks are not particularly heavy, but trade is slow. Only for most select qualities does the market show firmness.

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Use of Carbon Bisulphide.
J. H. BEATTIE.

Bee-Supplies in Colorado.
M. A. GILL.

AMERICAN BEE JOURNAL

WEEKLY—$1.00 A YEAR.

Published by GEORGE W. YORK & CO., 144 & 146 E. Erie Street.

44th Year. CHICAGO, ILL., FEB. 4, 1904. No. 5.

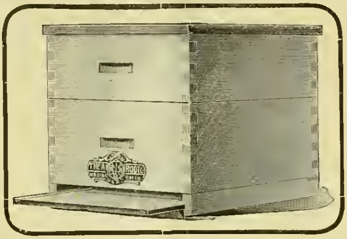
WEEKLY

C. H. W. WEBER—(See page 85.)

DANZENBAKER HIVE.

"FACTS ABOUT BEES"

A 64-page book written by Mr. F. Danzenbaker, giving a complete description of his famous hive and directions for using. Full of valuable information. Sent free on receipt of a two-cent stamp to pay the postage. Send for it.



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Five Danz. 4M sample supers including sections and foundation-starters. All 5 supers are nailed, and one has inside fixtures in place as a model, the fittings for the other four in flat........................ $4.75

The Danzenbaker hive is kept in stock at all our branch houses and principal agencies all over U. S. Our bee-supply catalog for 1904 gives complete prices, and will be mailed promptly on request.

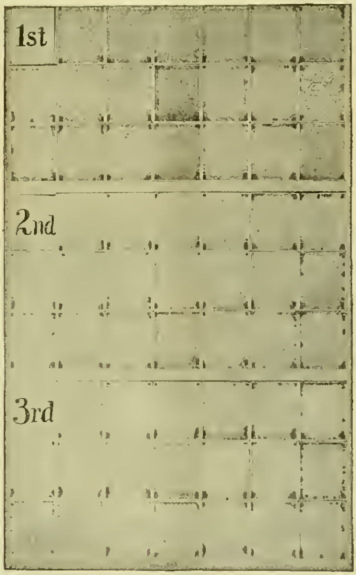
O. L. HERSHISER.

The Best Bee-keepers use it.

Mr. Hershiser, manager of the New York State apiarian exhibits at the Columbian Exposition, 1893, where he won credit for himself and State by his magnificent display of comb honey, was selected as superintendent of the apiarian exhibits at the Pan-American Exposition. Being an up-to-date bee-keeper, and having a keen interest in the latest apicultural appliances, he installed a trial apiary of 10 colonies of working bees, mostly Italians, but with some hybrids, and one colony of black bees. The last named made the best record, storing 111 pounds in a Danzenbaker hive.

The Texas Honey Producers' Association has this day endorsed the 4x5 section super, and favor the Danz. style with H. S. separators. We feel sure we will have orders for you of from 1500 to 2000 Danz. supers. THE HYDE BEE CO.
Floresville, Tex., Dec. 30, 1903.

I have kept bees three years, and owe my success to the Danzenbaker Hive. I shall as soon as possible send you a report of my honey crop. But one thing I know now, and that is, that one Danz. colony gave me over 100 lbs. first-class honey, while a ten-frame Dovetailed hive gave 25 lbs., and the Danz. winters in fine shape without feeding. Both hives had an equal footing.
JASON B. HOLLOPETER.
Union Bridge, Md., Oct. 26, 1903.



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From a photo of the 60 prize Danz. sections produced in the State of New York.

First 20 sections, net weight 19 lbs., 11 oz.; stored in Danz. hives, awarded diploma and $25 00.

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Third 20 sections, net weight 18 lbs., 13 oz.; produced in Danzenbaker hives, awarded $10.00.

W. Z. HUTCHINSON.

The Choice of an Expert.

Mr. Hutchinson, Judge of Apiarian Exhibits at the Pan-American Exposition, editor of the *Bee-Keepers' Review*, and an enthusiastic and thoroughly posted bee-keeper, was, without doubt, the most capable man who could be selected judge of any thing pertaining to apiculture. His decisions are given greater value because he is fitted to speak from both scientific and practical standpoints.

The Danzenbaker Hive will, I think, take precedence over all others. I am delighted with it, as it is simple and easily manipulated. R. H. PEPWORTH.
Pietermaritzburg, Natal, Nov. 30, 1903.

The Best Comb-Honey Hive.

I am *very very* much pleased that you are willing that I should recommend the Danzenbaker Hive. I have had a great many inquiries about it, and have not felt at liberty to recommend it over our regular hives. At first I was prejudiced against it, but the sales have increased without recommendations, and wherever I have sold they have bought again and praised the hive with extravagant claims, and I am forced to the conclusion that it is the BEST COMB-HONEY HIVE on the market. J. B. MASON,
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GEORGE W. YORK, Editor. CHICAGO, ILL., FEB. 4, 1904. Vol. XLIV—No. 5.

Editorial Comments

Carbon Bisulphide and Its Use.

Sulphur has played an important part with bee-keepers in the destruction of the larvæ of the bee-moth, albeit there is less need for it since the incoming of Italian bees. It seems likely, however, to lose its importance and give way to carbon bisulphide as a more effective insecticide. In this number appears an article which is quite full and instructive with regard to this drug, and although there may be nothing particularly new in the article, it will repay reading by those who are likely to use it.

The one particular danger in the use of carbon bisulphide should be kept fully in view: It is highly explosive. But there is no need to run any risk in this regard; keep away from it fire. Fire is not needed in its use, as it evaporates at ordinary temperatures, while sulphur can only be used by means of fire to produce the fumes, and care must be used to keep from burning up the building in which it is used. Carbon bisulphide has the pre-eminent advantage over sulphur, that it destroys eggs as well as larvæ. It does not discolor white comb, as sulphur sometimes does.

A pound of bisulphide is given for 1000 cubic feet of space; that would make a tablespoonful for about 27 cubic feet, or enough for 20 8-frame hive-bodies filled with combs, *providing* all is air-tight. In actual practice a spoonful may be used for four or five hives.

Paraguay as a Bee-Country.

The British Bee Journal copies from The Field, an article by John D. Leckie, in which Paraguay, in South America, is described as a field well worth entering by those of adventurous turn. The climate rivals that of Southern California; the bees can store during eight months of the year, and during the other four months they can find more or less flowers, so that it is only necessary to leave in the hives sufficient to tide over a possible ten days of wet weather.

The orange begins to bloom at the opening of the honey season, continuing in bloom for about two months, followed by numerous other flowers. "Orange trees are present everywhere in Paraguay; they grow wild in the woods in great abundance, and are, in fact, in many parts the commonest wild tree." The thermometer never sinks to the freezing point except sometimes in early morning, and rarely reaches 100 degrees. Compared with Australia, expenses of living and labor are much less, while prices for honey are higher. General farming is not lucrative, but stock-raising thrives, and may well be combined with bee-keeping.

Nothing is said as to society, and it is quite possible that a native of the United States might not feel entirely at home in Paraguay.

Overweight Honey-Packages.

While some are complaining of light-weight sections, W. Woodley complains in the British Bee Journal that so-called honey-jars hold more than a pound, as he found it took 28 pounds of honey to fill 26 jars just up to the neck. Possibly the heavier body of Mr. Woodley's honey had something to do with the case.

Election of the National Association.

As previously announced, no one received a majority of the votes necessary to elect a successor to Mr. E. R. Root as director of the National, thus leaving Mr. Root a hold-over. Having announced before the election that he would not serve if elected, he has now very properly sent in his resignation to the Executive Committee, which will choose his successor.

Fortunately, an incident of this kind is not likely to occur again, for the amendment to the constitution lately passed, if a like vote were to be taken again, would make Mr. Wm. McEvoy the director elected, as heretofore an election could only result where a candidate received more than half of all the votes cast, whereas it is now necessary only that he shall have the largest number of votes—in other words, the amendment makes necessary only a plurality vote, not a majority.

The Executive Committee have an easy task before them in the present case, as they have only to confirm the plurality vote received by Mr. McEvoy.

The amendment giving all the members of the Association an opportunity to vote for all the officers is an improvement. In so large a country as this the attendance at the annual convention must of necessity always be largely local, and in the choice of officers elected at such convention, there is some danger of local coloring, which will be eliminated by the present arrangement. It is to the credit of the majority of the members heretofore attending conventions, however, that so little of local sentiment has appeared in the choice of officers.

Abundance of Upward Ventilation in the Cellar.

Four years ago, as C. F. Smith relates in the Bee-Keepers' Review, a cover was moved half off one of his hives when being taken into the cellar, and in the spring the colony in that hive was in perfect condition, while all the rest were wet, moldy, diseased, and half dead. Since then he winters his bees without covers, although in a wet cellar, and has not lost a colony nor had moldy combs.

An Automatic Bee-Smoker.

For some time there has been in use in Europe a smoker arranged to run by clock-work. It takes about a minute to wind it up, and about 20 minutes for it to run down, providing it is allowed to run without stopping. But a little lever can be used to stop or start it at any time, so one winding may do for half a day or longer, according to the number of times it is allowed to act, and the length of time it is allowed to run.

Some of the transatlantic bee-keepers have spoken highly of it, but it has not come into notice in this country, although patented in the United States two years ago. The Editor of Gleanings in Bee-Culture has obtained one of the smokers, and speaks highly of the ingenuity of the invention, and thinks an expensive set of dies must be used in its manufacture. He further says:

> This mechanical smoker sends out a very light blast of air—so light that it can scarcely be felt. The smoke can, however, be sent several inches from the nozzle, and perhaps it is far enough for a good many operations. It weighs, however, about three times as much as the average smoker, and the fuel capacity is only about a tenth of that of an ordinary standard bellows smoker. It would do very well for a small number of colonies; but for the average American apiarist I doubt if it would give general satisfaction. The cost of it will be

least five times as much as that of a common bellows smoker, I should judge from its general construction.

The tendency in this country has been steadily toward a larger smoker with capacity for a greater quantity of fuel. To go back to a smoker carrying only a tenth of the usual quantity of fuel would hardly be tolerated. Add to this the small blast and great cost, and Mr. Root is probably correct in thinking that such a smoker will not find general acceptance in this country.

That Honey and Water Problem.

An inquisitive member of the Journal family writes us as follows on this subject:

On page 30, J. E. Johnson says: "Crystals and dry substances do absorb moisture from the air, but the same law in chemistry which furnishes moisture for the air would take from, and not add to, any liquid." Please tell us what that law is.

He also tells us that honey becomes thinner in a moisture-laden atmosphere, not by the addition of moisture from the atmosphere, but by decomposition of the honey, that decomposition being favored by the presence of the moisture in the atmosphere. Now, suppose we have a sample of thick honey in a moisture-laden atmosphere at a temperature of 50 degrees. Then suppose we take a sample of the same honey and thoroughly mix with it one-fourth of its weight of water, and put it in ordinary atmosphere at 100 degrees. In the first case the moisture that favors decomposition can act on the surface, while in the second case it is thoroughly incorporated with the whole, and can act on all parts at once, thus favoring more rapid decomposition, while the higher temperature is also more favorable to decomposition. Now, please tell us: Will the second sample, in the higher temperature actually become thinner with greater rapidity than the first? and, if so, how much more rapidly? SUBSCRIBER.

Will Mr. Johnson kindly reply to the foregoing ?

Visiting Apiaries Only Three Times a Year.

E. D. Townsend tells about it in the Bee-Keepers' Review. Extracting-colonies pass the winter in chaff hives, or packed in chaff packing cases, each having 25 or 30 pounds of honey, are left untouched whether weak or strong, through spring and until June, when they are unpacked and upper stories put on. One apiary thus treated had only two more visits for the season, although he says he would prefer to visit them once a week.

Miscellaneous Items

Mr. Noah Thomas, of Horatio, Ohio, for many years a bee-keeper, died recently at the age of nearly 78 years. His apiary contained over 40 colonies. He was a regular reader of the American Bee Journal for many years.

* * *

The California State Bee-Keepers' Association held its annual meeting in Los Angeles Jan. 4 and 5. The officers elected for the ensuing year are as follows:

President, T. O. Andrews; Secretary-Treasurer, J. F. McIntyre, of Ventura; Vice-Presidents, E. Hart, L. E. Mercer, George Hawley, George Emerson, J. K. Williamson, Delos Wood, F. E. Brown, L. L. Andrews; Executive Committee, Geo. W. Brodbeck, M. H. Mendleson, and G. S. Stubblefield.

* * *

The South Dakota Bee-Keepers' Association held its fourth annual meeting in Yankton, Jan. 20, at 2 p.m. The election of officers resulted as follows: President, Thos. Chantry; Vice-President, C. F. Lingo; Secretary, Jessie Mattison, of Tabor; General Manager, J. J. Duffack; District Presidents, Ben Schlaflle, L. A. Syverud, and R. A. Morgan.

A vote of thanks was extended the retiring officers for their efficient work during the past year, and Manager Duffack was handed a $5 bill as a slight recognition of services rendered. The members of the Association report a most profitable gathering, and that they had enjoyed the convention exceedingly.

* * *

Mr. G. F. Merriam, of San Diego Co., Calif., writing us Jan. 19, said:

EDITOR YORK:—Southern California has had a rain at last—the first—but it was so light that it was little or no good. Here, we got about ¼ inch, but this morning a cold north wind is blowing. We never get any rain while the wind is in the north.

A man put out a fire last week which burned over a fine bee-range for me, at one of my out-apiaries. G. F. MERRIAM.

Surely, the prospects for the bee-keepers in Southern California are far from flattering. In fact, if sufficient rain fails to come by the right time, the honey-flow will be doomed, and the bee-keepers will be in despair. How dependent we all are on water. What a great blessing it is.

* * *

Editor H. C. Morehouse, of the Rocky Mountain Bee Journal, writes:

"Becoming effective Feb. 10, the price of the Rocky Mountain Bee Journal will be advanced to $1.00 per annum, and enlarged to 28 pages."

This probably means what we have known for a long time, that no one can publish for any great length of time, a bee-paper worthy the name at 50 cents a year, where it is wholly dependent upon its receipts from subscriptions and advertising. If a bee-paper is worth anything at all it is worth $1.00 a year to any bee-keeper.

* * *

A Dry Time in Southern California.—Mr. W. A. Pryal, one of our valued California readers, wrote us as follows Jan. 13, from San Francisco Co.:

DEAR MR. YORK:—The clipping herewith sent you is from one of our local papers. It presents rather a dark picture of things climatically in the lower part of the State. It may turn out, though, that there will be abundant rains through February and March, and I trust such will be the case. It is not only the bee-keepers that need the rain, but all other persons as well, who depend upon the products of the earth drawn through roots of the vegetable kingdom. If I mistake not, the fruit-growers require more rain than others, as the ground has been dried out so deep that the soil will have to be well saturated to make up for four or five dry years that have gone by. While we had a fair rainfall in this portion of the State last year, still there are places where fruit-trees suffered, owing to the fact that the rain did not penetrate deep enough into the soil. So far this year, in the counties above here and on the eastern side of the Bay, but not inland, there has been plenty of rain. I have been told that something like 35 miles of here the rainfall has been less than half of what there has been in this city. Why, here the ground seems to be thoroughly saturated. No one here looks for a bad year, though the outlook in the San Joaquin and other valleys in the central and southern portions of the State, the prospects are gloomy. Yet, as I have stated, old Jupiter Pluvius—I think that's what they call him—may condescend to favor the whole State with a liberal dispensation of the fluid that makes plant-life grow, and thereby cause the wheels of commerce to hum.

While on this matter of climate, I shall take this opportunity to add a few lines that will make you wish you were out here by the Western Sea. I was over to the old home on both Christmas and New Year's—I never missed a Christmas at the old home, the scenes of my childhood, etc. Well, I went out with a lady who was at our home (she is from Los Angeles, I may add) to look through the raspberry patch—a large sized one it is, too. I thought I would be able to get some nice, ripe berries. And I was not mistaken. Some canes had large clusters of large, ripe fruit. The lady was surprised—though her people had been in the small-fruit growing business near the City of the Angels, she never saw ripe raspberries on the bushes at Christmas-time. And this lady is a native of Wisconsin.

Again, on New Year's, I had more berries off the same patch—there were boxes of them. And the bees were merrily humming amid the flowers of these raspberries. Then the callalilies were in bloom at the same time—and they and heliotropes, nasturtiums, and such-like semi-tropical plants, were in bloom, too. Just think, right about this bay of San Francisco you can gather luscious oranges from the trees in midwinter!

I notice by the papers that it is excessively cold in and about Chicago. Say, wouldn't you like to be out here where the sun shines nearly every day in the year, and where the thermometer seldom reaches as low as 26 degrees above zero?

But enough. We can not all live in one place.

San Francisco Co., Calif., Jan. 13. W. A. PRYAL.

Now, look here, Mr. Pryal, if you don't stop holding up such alluring temptations right before our eyes, as mentioned in your last two paragraphs, we don't know what we will do to you. What do you think we are made of, anyway, to withstand such suggestions?

But you don't say anything about the beautiful snow, and eight weeks of fine sleighing, such as we have here this winter. Who'd want to be melted all the year around, and befogged, and covered up with dust, besides? No'p; we're going to 'Slangeles, some time, just to rest up; and may be to Catalina again. But that will likely be all we can do, for on a weekly paper like the American Bee Journal we can't be away very long at a time.

Oh, yes, here's that clipping you sent along with your good letter:

DROUTH IN SOUTHLAND IS BECOMING SERIOUS.

LOS ANGELES, Jan. 12.—The drouth which has continued throughout Southern California for more than three months, just at the season when under normal conditions there is the most plentiful supply of water, is becoming a serious matter to ranchers, and particularly to owners of livestock.

According to a bulletin just issued by the Weather Bureau, this season has been thus far the dryest since the winter of 1863-64, when, according to the records, which were then kept by individuals, no rain fell during the winter. There is water for irrigation, much of it from artesian sources, but the artesian plan has been lowered to such an extent that many wells, which have always been flowing wells heretofore, must now be pumped.

The expense to cattle-owners is enormous because there is no green feed, and the prices of dry feed are accordingly high. In places the absence of water is causing suffering among the cattle. No rain has fallen here since Oct. 1. There have been slight showers in places, but no general downpour of sufficient volume to do any real good. Despite these unfavorable conditions the prospects are most flattering for an excellent citrus crop.

Some Expert Opinion

"In the multitude of counsellors there is safety."—BIBLE.

What About Reversible Brood-Frames?

If for some reason you were to start in anew to keep bees, and were obliged to get an entirely new outfit—

Ques. 5.—Would you use a reversible frame? If so, why? If not, why?

N. E. France (Wis.)—No. No advantage.

Eugene Secor (Iowa)—No. Too much monkey-work.

Mrs. J. M. Null (Mo.)—I have no experience with reversible frames.

P. H. Elwood (N. Y.)—No. The reversible fad has gone by, never to return.

O. O. Poppleton (Fla.)—No. Too much labor and bother for the benefit obtained.

J. M. Hambaugh (Calif.)—No. I do not consider it worth the trouble and expense.

Mrs. L. Harrison (Ill.)—No. I'm too old to try new inventions. I do not like changes.

G. M. Doolittle (N. Y.—No. Because its disadvantages are more than its advantages.

Geo. W. Brodbeck (Calif.)—No. I can accomplish all that is required without reversing.

Dr. C. C. Miller (Ill.)—No. I don't know of any sufficient advantage to make it advisable.

Adrian Getaz (Tenn.)—No. No advantage whatever. Useless complication in fixing and handling.

C. P. Dadant (Ill.)—No. Reversing has never proved practical or advisable, except in very rare instances.

C. Davenport (Minn.)—No. I do not believe there are advantages enough to offset their disadvantages.

E. E. Hasty (Ohio)—Think not. Advantages some, but not enough to justify "fussing up" the frame.

Rev. M. Mahin (Ind.)—I would not. I can see no advantage in it. It only makes extra trouble for no benefit.

Wm. Rohrig (Ariz.)—I think not. I have never used them to any extent. If I had more of them I might like them better.

Jas. A. Stone (Ill.)—Because I never had faith enough in such *modus operandi* to give it a second thought, let alone trying it.

L. Stachelhausen (Tex.)—No. What advantages are claimed for a reversible frame I can obtain in a cheaper and simpler way by a two-story brood-nest.

E. S. Lovesy (Utah)—No. Because a reversible frame would hardly be practicable in the style and size of hive and frame such as I have given the dimensions of.

Dr. J. P. H. Brown (Ga.)—No. The extra expense in hive-construction, the extra labor and the extra "fuss," would cost more than the *seeming* advantages would amount to.

C. H. Dibbern (Ill.)—Yes, I have used a reversible frame for the past 20 years, and while I find little use for reversing shallow frames, it is *sometimes* convenient, and makes a stronger frame to handle.

G. W. Demaree (Ky.)—After trying reversible frames carefully, I discarded them long ago, and would not use them under any circumstances. Why? Because I have found them impracticable.

R. L. Taylor (Mich.)—No. Because reversing frames is unnecessary work. With my hive I can get all the advantages of reversing by putting the lower section of the hive above the upper one.

Prof. A. J. Cook (Calif.)—I hardly think so. I like simplicity. If I wished to reverse—and it certainly is desirable at times—I think I should reverse the whole hive. The Heddon reversible hive worked well in my hands.

J. A. Green (Colo.)—Yes. A reversible frame can be entirely filled with comb, giving more surface for brood or honey. Sometimes reversing a frame will aid materially in getting honey transformed into brood, or getting honey moved from the brood-chamber into the sections.

S. T. Pettit (Ont.)—No. The advantages, if any, would not compensate for the extras. Bees build the cells of their combs with an upward angle, for very good reasons. When the comb is reversed the angle of the cells with its advantages are reversed.

E. Whitcomb (Nebr.)—No. Reversing frames in the bee-hive seems, in a measure, to disarrange their manner of housekeeping, and to keep them working their former arrangements over again. For ourselves we would not care to have some person come along occasionally and turn our home upside down by turning the house over, or reversing it, as the saying goes. Bees appreciate about the same conditions in the hive, and generally we like to place every frame just where we took it out when looking the colony over.

R. C. Aikin (Colo.)—I would not use a reversible frame; at least I feel that way now. Such would have slight advantages in deep frames. But, say, my shallow frames *are* reversible; they are exactly alike either side up, but I do not practice reversing, generally. Because when I "alternate," putting the bottom part of my divisible brood-chamber hive to the top, or in the middle if there be 3 or 4 sections as there often are, the combs that are toward the top will be built solid to the bottom-bars. Split such a hive in the middle, putting the lower half to the top, and the upper to the bottom, and you have brood to the very last row of cells next the top-bar, so if they store honey above the brood it *must* go above the brood-chamber. I do not think reversing will pay with deep frames, and it is not necessary with shallow ones. I do, however, when manipulating the little frames, often turn them upside down, sometimes to get the comb built to the bottom-bar, which now becomes the top, and sometimes to make the combs fit better when changing the order in which I found them.

Sketches of Beedomites

C. H. W. WEBER.

Mr. Weber, whose excellent likeness appears on the first page, was born in Hanover, Germany. After a good schooling he secured employment in a dry goods house, and remained there from eight to nine years. In 1866 he came to America, and upon reaching this country started for Cincinnati, where he found work in the same line.

In 1868 he was employed as clerk by the late Chas. F. Muth, whom he now succeeds. At that time Mr. Muth had just started in the bee-business. Upon making his visits to bee-keepers, he would take Mr. Weber along for company.

In 1872 Mr. Weber went into the grocery and seed business for himself, and continued many years with success. After Mr. Muth's death, the heirs asked Mr. Weber to be his successor. With the aid of his ambitious son, Mr. Weber undertook the business, and he has built up a large trade, handling from six to seven cars of bee-supplies in a season. He also has bought and sold, this season, five cars of comb honey, which was mostly received from the West. He has a large honey-trade, as he handles nothing but the pure article. His sales of extracted honey for manufacturing purposes amount to about 60,000 pounds per month. His honey-bottling department is greatly improved, and he can now bottle 1500 pounds per day. Before taking any honey into his place, Mr. Weber makes a chemical analysis, as he can detect any adulteration of even 5 percent.

Mr. Weber is a great bee-lover, and has a roof-apiary of 50 colonies, five stories high, used mainly for rearing queens. He has another apiary 5 miles from Cincinnati, and still two other apiaries in different places near Cincinnati.

Mr. Weber is treasurer of the Hamilton County Bee-Keepers' Association, and is doing all in his power to have a county inspector appointed in order that the dreadful malady, foul brood, may be wiped out of the country. Mr. Weber is satisfied that in one or two years formaldehyde will be the extinguisher.

We had the pleasure of meeting Mr. Weber when attending the Denver convention of the National, a year ago last September. He is a sturdy, honorable German, as his picture indicates. He is also one of the American Bee Journal's reliable advertisers.

Los Angeles Convention Report.—We find we have left some complete sets of the American Bee Journal containing the full report of the proceedings of the convention of the National Bee-Keepers' Association, held at Los Angeles, Calif., in August, 1903. There are 14 copies in a set. In order to close them out quickly, we will send them, postpaid, for only 10 cents a set, in stamps or silver. Better order *at once* if you want them.

Contributed Articles

Life of Bees—England and America Agree.

BY G. M. DOOLITTLE.

I HAVE read and re-read the comments of D. M. M. and the editorial remarks thereon, as found on page 820 (1903), and, notwithstanding the conclusion that "The Life of Bees" might be a "matter that should be taken up by the experiment stations," I do not see that such should be the case from any material difference which comes from the experiment as conducted by D. M. M., and those which have been conducted in the United States. The experiment of D. M. M., as he reports, really shortens the length of life of the worker-bee in the working season from the six weeks, as formerly given by our experiments on this side of "the water," to only 40 days on the England side; instead of its being 61 days, as figured out on page 820. [This was corrected on page 19.—ED.] Assuming that D. M. M. removed his black queen on June 6, as he gives the matter, the last black bee would not have emerged from her cell until 21 days thereafter, which would make the date we should figure from, in getting the life of those bees, as June 27. And as he says that all had disappeared on August 6, we have the matter thus: 3 days remaining in June, during which the last-emerged bee really lived; 31 in July, and 6 in August, supposing that the latest descendant of the removed black queen died on that date (Aug. 6). Thus, we have in days lived by those last emerged bees, 3, 31 and 6 added together, which makes just 40 days instead of the 61; for in this matter we cannot consistently say that the bee is living in the "real life form" while it is in the egg, larva, or pupa state of its existence.

And if the above is right, to which think all will agree, then it would go to prove that from some reason, such as the state of atmosphere, longer journeys after forage, or different environments, England is not so conducive to length of life in or with the bees as is the United States; for our experiments here have repeatedly shown that black bees live in this country 42 days, as against the 40 in the experiment of D. M. M.

I see that D. M. M. marvelled over the rapid disappearance of the black bees, especially during the last "fortnight." That was just the way it appeared to me in my experiments. But there is an item here that we often lose sight of, and one that has much to do with the having of the maximum number of bees on the stage of action in just the right time for the honey harvest of any given season of the year. That colony of his did not reach its maximum strength, as given by that black queen, till June 27, or just 21 days after she had been killed or removed from the colony; that is, if his clime and locality is anything as it is here in New York State. He estimates that his colony had 30,000 bees in it at the time he put in the Italian queen, and, if so, I venture that the same colony had at least 45,000 bees on June 27, at the date of the last emerging black bee; for, with me, queens very nearly or quite double the amount of eggs they lay during 24 hours between May 16 (the time the last eggs were laid for those bees which were in the colony when he estimates them at 30,000) and June 6. In other words, if any queen is laying 1500 eggs a day on May 16, in this locality, she will be laying from 2500 to 3000 each day during the first half of the month of June. Hence, all will see why it appeared that the "decrease in numbers was something extraordinary" during the last fortnight, for there were nearly double the bees to die each day during that time that there were at the time of the introduction of the Italian queen. My experience would say that the bees were dying during the first days of August at the rate of from 2000 to 2500, instead of the 500 that he gives as the average.

Some seem to think that this age of bees, or how long they live, amounts to nothing except as those who write about it have a little scientific controversy over the matter; but I claim that on this thing hangs something of vital importance to every practical bee-keeper. Supposing that from some reason that Italian queen had been killed, and that no other had begun to lay till 20 days later, as would have been the result had no queen been given (as is usually the case where nature takes its course after a queen is removed); then D. M. M. would have had a colony right in the height of the basswood honey-flow, had he lived in this State, with a big shortage of bees just when they were needed the most.

I do not know that I have made this as plain as I might have done, but the practical thing I wish to impress on every apiarist is this: Don't remove any queen, if you can possibly help it, from any colony during any time from 40 to 70 days previous to your expected honey-flow—that from which you expect to derive a surplus; for if you do, you will cut the laborers short during your harvest by about 2,000 to 3,000 for each day there is no laying queen in the hive, and this cutting short often makes the difference between a paying crop of honey and no crop at all.

I knew a bee-keeper who once changed all his queens during the last half of May and the first half of June, according to the advice of a neighbor, allowing each colony to rear its own queen, and the result was that he got scarcely 100 pounds of honey from his whole apiary, while the bees about him did fully as well as usual.

Onondaga Co., N. Y.

Carbon Bisulphide as an Insecticide.

BY J. H. BEATTIE.

DURING the last few years carbon bisulphide has been much used as an agent for destroying insects and vermin infesting grain, dwellings, mills, elevators, etc. It has many qualities which make it highly desirable for such purposes. It is not poisonous to the higher animals when taken in small quantities, hence an inexperienced person can use it with comparative safety. This is true of very few of the best insecticides. They are either extremely poisonous, or so difficult to handle that they can not be used by any but an expert.

Carbon bisulphide, under atmospheric pressure, is a gas, but it may easily be kept in the liquid state by keeping it in air-tight vessels. It may even be preserved by placing it in an open vessel and covering it with water. The pressure given by the weight of the water is sufficient to prevent it from volatilizing. The specific gravity of carbon bisulphide at 0° C. is 1.20. When in the gaseous state it has a specific gravity of 2.63 as compared with air. This fact makes it very useful for places like granaries where the top is open while the bottom part of the granary is tight.

One of the greatest objections to the use of many of the more common insecticides lies in the fact that they can not be used where there may be either prepared or raw materials. For example, hydrocyanic acid can not be used where there are food materials, as it is a gas only at relatively high temperatures, and hence will condense on cold subjects such as potatoes, apples, etc. Again, it is very soluble in water, and as all prepared food-stuffs contain a large percent of water, it will readily be seen that these food-stuffs would most surely be poisoned if the building containing them was to be fumigated with hydrocyanic acid. On the other hand, carbon bisulphide is free from both the above-named faults. It will neither condense on cold objects, nor will it in the least injure food-stuffs. It may even be used on prepared foods, and, provided that it is given time to evaporate these foods, may be used without the slightest danger.

Carbon bisulphide is not poisonous to man unless breathed in comparatively large quantities. It will, when taken in excessive quantities, produce dizziness, congestion, coma, and finally death. It affects the heart action especially. Persons having weak hearts will do well to keep away from carbon bisulphide.

The variety of uses to which carbon bisulphide may be put is very large. It may be used around the dwelling to destroy cockroaches, mice, rats, flies, etc. It may be used to rid grain of weevil or similar pests. It may be used to rid mills and elevators of the flour-moth, or, in fact, of any insect or animal. It is quite often used to destroy ant-hills. It has been used with great success to kill gophers or woodchucks in their burrows. It is quite often used in conservatories to rid the plants of lice. It must be said, however, that as a general rule hydrocyanic acid will be found more satisfactory for this last purpose.

Carbon bisulphide may be obtained on the market in cases of various sizes. The one-pound can will be found to be a very satisfactory size for most people. Persons intending to fumigate large buildings will, of course, find it more economical to buy the bisulphide in large quantities.

As to the amount of carbon bisulphide to use for buildings, proceed as follow: Calculate the cubical contents of the building, then provide one pound of bisulphide for each 1000 cubic feet of space. Also provide shallow dishes or crocks, one for each 1000 cubic feet of space. Distribute these vessels over the building as evenly as possible. Make all windows and doors as near air-tight as possible. Commence on the ground floor, and place one pound of the bisulphide in each dish. Work rapidly as possible to be consistent with thorough work. When the bisulphide is distributed over the first floor, proceed immediately to the second floor, closing the door between the floors completely. When the top floor is reached, leave the building by means of a ladder previously provided. Do not go near the building until several hours have passed.

It is well to begin the fumigation in the evening, and by morning all the gas will have disappeared unless the building is unusually tight. In some cases it will be well to place a watchman to keep all persons away from the premises.

One thing must always be borne in mind, the gas is extremely inflammable, and hence every precaution must be taken to have no fire around. Incandescent lights are not safe, as a spark is liable to be formed in switching the lights on or off.

In fumigating such materials, as stored grain or ground feed. it is generally thought best to proceed as follows: Allow one pound of the bisulphide for each 100 bushels of grain, or in cubic feet, one pound of bisulphide for each 125 cubic feet of space actually occupied by grain. Put the bisulphide in shallow vessels placed on the surface of the grain, and leave the immediate vicinity at once.

If ordinary precautions are taken there need not be the slightest danger in using carbon bisulphide.—The Agricultural Student.

Convention Proceedings

THE COLORADO CONVENTION.

Report of the Proceedings of the Colorado State Bee-Keepers' Convention, Held in Denver, Nov. 23, 24, and 25, 1903.

BY H. C. MOREHOUSE, SEC.

(Continued from page 69.)

QUEENS AND THEIR IMPORTANCE.

Mr. Gill—The queens that we have in the apiary put money in the bank. There is a difference in races, and a difference in individual queens. By careful selection, I have been trying to improve mine. In Wisconsin I succeeded admirably. I got my first in 1878, and in the succeeding 16 or 18 years I materially improved them with reference to the traits of using wax instead of propolis, hardiness, wing-power, and honey-gathering qualities. Last year I bought 250 queens, 25 to come a day during the swarming season, of the same strain I had in Wisconsin years ago, from a thoroughly reliable man. He had been running for extracted honey, and dequeening about June 25 for the basswood flow. The queens had been reared last year from good cells, and were taken from the hives in full condition. This proved to be harmful. To-day not 40 or 50 percent are alive. Some did not begin to lay soon, and some were drone-layers, and their colonies did not begin to be as good on the first of August as colonies that had been given good, ripe cells. Therefore, to take queens in the height of the breeding season and mail them in hot weather is very unsatisfactory. I also got 50 queens from Tennessee, young queens just beginning to lay. They proved very effective and satisfactory. Therefore, for much of the difference between queens the queen-breeder is not to blame, but it is a matter of the proper conditions.

A Member—I had a little experience with young queens from the South. Instead of putting them in large colonies, I put them with one or two frames of brood as early in the spring as I could, and built them up. I took as high as three supers of honey from such colonies.

PLANTING OF TREES AND CONSERVATION OF FORESTS.

Mr. Stone (President of the State Forestry Association)—The subject I have to present to this convention will interest every man who has to do with the soil, as all rural pursuits depend so largely upon irrigation. Our State Forestry Association was organized in 1884, and we have kept up our activities ever since. It has been and is now entirely a voluntary organization, with no official connection with the State, governor, or legislature, and consequently no government patronage. As to our expenses, we depend upon membership fees. What we stand for is contained in our constitution—the planting of trees and the conservation of forests. I wish that every farmer who owns land would plant a few useful trees, such as black locust and catalpa. In a few years he would begin to draw his recompense.

Three weeks ago our association decided to try to induce the authorities at Washington to increase our forest preserves for the preservation of moisture. The Government has already done much to stir us to action. On the map that I show you, you can see that four areas are at present reserved; each of contiguous land. But in these four are six: The San Isbell Reserve, on the Sangre de Christo range, of 120 square miles; the Battlement Mesa Reserve, including Grand Mesa, of 1850 square miles; the White River Reserve, of 1830 square miles; the Pike's Peak Reserve, of 279 square miles; the Plum Creek Reserve, of 1086 square miles; and the South Platte Reserve, of 1086 square miles, making a total amount that is about equivalent to the area that we have under ditches. We propose, in addition, to ask for a reservation beginning at Wyoming, and going clear down the range. We can not have too many reservations at the headquarters of streams. Our petition to the Secretary of the Interior recites, first, that agriculture in this State is almost entirely dependent upon irrigation; second, that that portion of irrigation which comes from the high mountain ranges is dependent for the quantity and quality of its flow on forests and the preservation of forests; that the effect of the careless removal of the forests of these mountain areas has already tended to dry up the streams and fill up reservoirs and canals with sediment; and therefore asks that all territory in the basins of rivers and creeks, beginning with the Medicine Bow range, and continuing south to include the Sangre de Christo range and the Saguache country, and especially all areas above 8590 feet, be set apart as forest areas, and tracts reforested, except such as are necessary for mining ranges.

Mr. Fellows—I didn't come to make a speech. I think this is one of the most important questions that affect the State. As a government official, I naturally realize it more deeply. It is a fact that the water supply is so threatened that it is almost a doubtful proposition. There are three projects of government works for irrigation on the South Platte, the Grand, and the Uncompahgre and Gunnison rivers. No great project can be carried out on the first, for the Platte supply is practically exhausted now; that is, if there were an average flow next year equivalent to what has been the flow of late years, and all the reservoirs now built took water, they could not all be filled and reserve water priorities. The Grand River project is still feasible, but the several ditches now built or projected would take all the flow at Grand Junction. The Gunnison River tunnel is the most feasible, but at the same time the flow is so low that it is considerable less than the tunnel will carry. But there is ground for alarm lest denudation of the forest slopes affect the latter two projects also. It is therefore absolutely demonstrated that denudation is one of the prior causes of the lack of water.

Mr. Stone—We have local petitions, but the one here presented is the general one for the whole State, such as we ask other State organizations to support.

Mr. Rhodes—I move we indorse the work presented, and instruct our President and Secretary to sign the petition as presented by Mr. Stone. [Carried.]

Mr. Pease—If the water for the projected reservoir to supply the High Line ditch is already exhausted, is it not a waste of money to build it?

Mr. Fellows—It may be successful in taking floods of short duration. This would not be true if water were required to be carried to it for 100 or 150 days.

APIARIAN EXHIBIT AT ST. LOUIS EXPOSITION.

Ex-Senator Swink made a strong plea for an apicultural exhibit at St. Louis. He said it was the time of our life to make an exhibit, as it was the biggest exposition ever made in the United States. Nearly every other exposition has been somewhat local, but St. Louis is universally conceded to be the best place for it. Though this last year has been one of the off years, he is confident that a good display can be made, by including next season. Some say they sent exhibits to former exhibitions, but never heard of them again; but he will have charge of this exhibit, and will see that everything is returned or sold, and the proceeds turned over. He knows the exhibit he made in Omaha sold a great deal of Colorado honey, and is sure that this will. A fine display can be made if all chip in what they can. He expects to give all his judgment to the matter, and use the judgment of others. He has the promise of the best space, and the best location, in the Horticultural Building. He especially recommended sending something special, out of the common order, as it catches the eyes of many thousands, and goes a long way toward the success of a general display; it costs more to prepare such an exhibit, but it pays. The superintendent has promised to arrange to have colonies of bees there in working order.

Mr. Wilson spoke in the same vein, saying that Colorado melons have a national reputation through Senator Swink's advertising, and we can have the same reputation for honey by advertising in the same way. Each individual who sends an exhibit will be given credit for it.

Pres. Harris—Unless we look out the Mormons will take the first prize. They are making extensive preparations for the Exposition.

Mr. Gill—I move the Colorado State Bee-Keepers' Association give earnest and loyal support in getting up a proper exhibit at St. Louis next year. [Carried.]

Mrs. Mary Wright, State Dairy Commissioner, was introduced, and said she would do all in her power to aid the bee-keepers in doing away with the competition of impure honey.

Mr. M. A. Gill, of Boulder Co., then read the following paper:

TO WHAT EXTENT WILL IT PAY COLORADO BEE-KEEPERS TO MANUFACTURE THEIR OWN SUPPLIES?

In my opinion the time has come when the bee-keepers of the West should manufacture the most of their supplies.

In making our own supplies, as in buying them, one of the vexations is that we require so many different systems, which, of course, will require different kinds of hives. But these notions of ours can be met just as well by making them as by buying them; the only difference will be, it will cost a little more, like it does any manufacturer to be all the time changing his machinery.

We should simplify our fixtures just as much as possible, and this will not only cheapen them, but enable us to handle more bees. Most amateurs, when they look at a complicated hive-cover, or a complicated frame that is hard to make, will think that there is some hidden potency in the construction that is necessary for them to secure the largest production of honey, or the successful wintering of their bees. But the practical, experienced bee-man knows that the more simple we can meet the requirements of the bees the better it is for the bees, as well as the most profitable for the owner; and that many of the complications are a trick of the manufacturers to head us off from making our own supplies.

It has been said that Colorado had no lumber that would make a good bee-hive, and I, myself, used to think that way. But four years ago I made 200 hives and 600 supers from white spruce. The lumber was well seasoned. I cut them accurately and nailed them up in a workman-like manner, and gave them two good coats of lead and zinc paint, and I find them to-day in better repair than hives made from soft pine by Eastern manufacturers. When I say better repair, I mean the whole 1½-story, which includes the super, cover, and hive-follower, all of which are a nuisance as now made by the factories.

There is also a species of soft white pine that grows high up in the snow in the vicinity of Long's Peak, that also makes a good hive. Most bee-keepers around Longmont have been making their own hives for the past four years. We find it the most satisfactory to give our orders for lumber right to the mill owner, and have our lumber cut with proper regard to width and thickness, so that when the lumber is seasoned, planed, and cut into hives, there is the least possible waste.

We have bought our pattern slats (for supers) and Hoffman frames in the East, and for my own part, for comb honey and rapid handling, I must say I prefer the Hoffman frame, but as the price has gone to 2½ cents each, I think we shall change to a plain staple-spaced frame, with heavy top-bar, and made from our best, picked, native material; and I think they can be made for one cent each.

I will say to any one who intends to make his own hives, Don't make them from any lumber you can pick up, or you will be sorry you did not buy your hives at any cost. Two years ago I could not get white spruce or white pine, and so I made my hives and supers from what was called Arizona spruce, and it proved very unsatisfactory. Mr. Hickox also made a quantity that season from the same material, and I think it about disgusted him with home-made hives. Thus, I say, get the best native material, have it well-seasoned, then make it up in a workman-like manner, paint it good, and your hives will prove satisfactory, and you can make nearly two for the price of one Eastern hive.

Our Longmont hive is made so that all parts are interchangeable with the standard 8 or 10 frame hives, but, in my opinion, it is a better and more substantial hive.

We have a better super, more convenient for rapid handling, and more substantial. For my part, I do not like the little wiggly, short-lived section-holders of the factory-made hives. I do not like the hive-followers that are made from the scrap-pile at the factory, nor do I like the covers as furnished by the factories, that will leak and commence falling to pieces within two years in this climate.

But I am not here to discuss my own likes and dislikes, nor my particular kind of hive and fixtures, but that a good hive can be made from Western lumber, and at a price that we can afford.

I want to say that I have no complaint to make against any Eastern manufacturer, nor any Western dealer, nor have I any hives to sell, nor any interest in the sale or manufacture of any hives or fixtures. I am simply a honey-producer, and from this stand-point I find it sensible, as well as profitable, to have as little money tied up in fixtures as possible and still keep our bees in merchantable shape.

While we have never made any shipping-cases, I believe they can be very profitably made somewhere in the West for 10 cents each, even if they are not quite so fancy in appearance as the Eastern made.

We are told that the prices of sections have been nearly doubled on account of the great scarcity of basswood lumber, and that we must soon return to the use of the four-piece section. I will say that when I can not have the Rauchfuss press and the one-piece section, I shall return to the production of extracted honey entirely. With regard to this, let me say, Have no fear for the next few generations but what the dealers will furnish us with basswood sections if we pay the $4.00 and $5.00 per thousand. If I did not know something about the millions of feet of standing basswood to be found in that section of our country lying between the great Mankato woods in Minnesota and extending to New York, and including the Canadas, I should think perhaps that the great shortage of basswood lumber was the only cause for the recent excessive rise in the price of sections; but I know that the price of basswood lumber in my old State (Wisconsin) has not risen as has the price of sections.

There is a great future for the bee-industry in the great West, and the new Moffet railroad will open up a section of country where there are vast quantities of lumber that will make good bee-supplies (not including sections), and in my opinion there is a good field right now for the extensive manufacture of bee-supplies right here in this Western country. M. A. GILL.

Mr. Gill—I want to say a few things not in the paper. I feel that while we have been allowed to be carried along in advance of the prices, the time has come to show those people they can't infringe on us. Material is not so scarce. The only way is to force them to come down.

F. Rauchfuss—At what price can you buy lumber in Longmont suitable for hives?

Mr. Gill—White spruce, just such widths and thicknesses as are wanted, costs us $10.50 per thousand; and well-seasoned, $17.50 per thousand, and $3.00 for dressing.

F. Rauchfuss—How does it run as to knots?

Mr. Gill—We picked the lumber. There are some knots, but they are tight, and do not show through the paint.

Mr. Whipple—I made 300 supers at a cost of not quite 10 cents apiece, as good as anything I can buy.

Mr. Aikin—How shall we reconcile our use of native lumber with our support of the Forestry Association?

Mr. Gill—We will observe the laws, but this is a question by itself.

H. Rauchfuss—I believe the time has come to manufacture our own supplies, not only in Colorado, but in the other Western States. The manufacturers have formed a trust. Next year perhaps they will add 5 percent to their prices, and next year again, and so on. We have to show them we are fixed for making hives. I don't think we will have to make very many.

Chas. Adams—For four years I have used Mexican or Oregon pine in making hives, and found it satisfactory.

Mr. Gill (showing a 1½ story hive)—This hive in the flat costs about 80 cents, including the pay for labor, which is 17 cents. The super-slats are ⅜ inch instead of ¼ inch.

Mr. Aikin—This discussion is intensely interesting, but I see difficulties ahead. Where is the supply of lumber to come from, especially when our forest reserves shall be established? Perhaps the reservoir system may help out the forests. But, after all, I have never been able to make hives as cheaply as I could buy them, except once. But I am heartily in sympathy with the movement. It may bring the transportation companies to a recognition of the facts. This transportation question is no small item.

Mr. Gill—The supply is not so limited as you would be led to think. But if a large factory is established, then the place to get lumber from would be Idaho, which has vast forests. The new railroad to Salt Lake will open up many tracts not at the headwaters of streams. I think Mr. H. Rauchfuss struck the key-note in his remarks.

Mr. Morehouse—For five or six years I have made my own hives from Mexican pine, and found it satisfactory. It cost me $24 per thousand.

Mrs. Booth—Supposing we did get a factory, how long would it be before an opposition would be started?

Mr. Swink—The difference between lumber in the rough and bee-supplies is simply enormous, so that the freight-rates alone would be a big saving. There is no question but we can get the lumber as well as they can.

(Continued next week.)

Report of the Nebraska Convention.

The Nebraska State Bee-Keepers' Association met in the experiment station building at the University farm at Lincoln. The attendance was large, and much interest was shown in the discussions.

Pres. E. Whitcomb opened the program with an address on "The Past, Present, and Future of Bee-Keeping in Nebraska." He related that his interest in the bee-business dated from the time he foraged a barrel of honey during the Civil War. Bees were first found in Nebraska by soldiers, who usually robbed them of honey. An instance is on record of a soldier being killed by honey obtained in this manner. Mr. Whitcomb explained that honey was not poisonous, but that when bees were mad, a poisonous substance called formic acid was dropped on the honey by them, and this is why honey taken by the robbing process is often fatal. He said that Nebraska had a great variety of honey-producing plants, and that this fact accounted for the great variety of honey produced here.

Mr. Whitcomb deplores the habit of nurserymen in spraying their fruit-trees while in full bloom. The bees are killed by working on these blossoms, and the spraying is no more effective than if done at a later period. Nurserymen would have but poor success if it were not for the bees.

The honey-production in Nebraska, he said, was 1.5 pounds per capita, and one pound of honey is as valuable for food as two pounds of pork, and contains as much medicine as any drug-store would sell for 50 cents. He said that because alfalfa has so little flavor some people think it is manufactured. Comb honey can not be adulterated, but a glucose mixture is often sold for extracted honey.

Miss Lillian Trester next read a very interesting paper entitled, "The Supply Dealer." She said that supply dealers like to meet their customers, and to encourage beginners. They were always willing to advise customers, but that sometimes it is better to let the customer have what he wants, and then he will be better satisfied.

After a recess resolutions on the death of M. L. Trester were passed and ordered spread on the minutes, and that a copy be sent to the bereaved family. Mr. Trester was a member and an ex-president of the Association.

The report of L. D. Stillson, as secretary-treasurer, was read and adopted.

Officers for the ensuing year were elected as follows: President, E. Whitcomb; Vice-President, L. H. Trester; Secretary-Treasurer, L. D. Stillson, of York.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

THE "LARDING" OF BEE-QUILTS.

A little rough on the bees, to give their new quilt of old carpet a heavy daub of old, rancid lard. Probably they will stand it rather than abscond (that is, providing they are not a newly-hived swarm), and the real harm may be small, except to the bee-keeper's own feelings. Some fussing may be called for before all the underside of the quilt gets propolized over—strips of it being protected by the wood of the frame-tops. It is possible, however, to have it nearly all coated the first exposure if there is just the right amount of burr-comb to lay it on. I use enamel, and have lots of trouble about bees eating holes. I think stray larvæ of the wax-moth start the hole in most instances, and then the bees are zealous to enlarge it. Wonder if a sufficient daub of lard would disgust the larva, and keep *him* from eating holes. W. A. Moore, page 796.

BUTTERFLIES DON'T PRODUCE MOTHS.

No, Mr. Nebraska, your killing all the butterflies, and your not being troubled with moth-worms last summer, are totally unrelated "happenstances." The mother of this mischief is too small, and far too sly, to be attacked in that way. And systematically killing the wrong kind of creature doesn't make us feel right in our own eyes, most of us. Let's be sure we've got after the right villain, and then go ahead with the killing. Page 797.

BURNING UP ROBBER-BEES.

Burning up bunches of would-be robbers with a torch is a vehemence of warfare not to be followed in ordinary cases. Barely possible that there may be extremes in which it would be justifiable. But things come into my mind once in awhile. Had the excited bee-man spent a couple of days beating a tin pan, or in any other way of working off surplus nerve force, might not the bees have become quiet the third day just the same? Page 798.

STEEL-PLATE NO GOOD FOR HIVE-ROOFING.

So! In the modern direct processes of making steel they burn out some ingredients which used to protect iron plate from corrosion. Eventually they will learn to put these things in again at the close of the process; but, perchance, a good many years of trouble will ensue first. Sad to find that steel plate is no good for roofing any more—and that even thorough painting does not make it so. My "notions" incline me to feel very contemptuous toward painted cloth for roofs; but it begins to look as if I should have to do what others before me have had to do—give my notions up. Page 798.

MAN-PICKED AND NATURE-PICKED DRONES.

If the alternative comes to man-picked drones or Nature-picked drones—only that and nothing more—man is going to worse than waste his time, I very freely grant. But let men pick a thousand, and then Nature pick one out of the thousand—what's the matter with that scheme? At any rate, we may be glad to know that Nature has a method of breeding by selection which is very hard to improve on.

BANDED BEES IN EVERY APIARY IN CARNIOLA, NOT IN EVERY HIVE.

I was intending to remark, anent a matter gone by, that Frank Benton's corrected observations concerning bees in Carniola, was that he found banded bees in every apiary, but not in every hive. Guess it is not too late to make the correction now.

BIG BARRELS IN CANADA.

We knew that Canada was a country inclined to biggishness, but we didn't know before that a barrel held 1000 pounds up there. Why, a barrel with 1000 pounds of honey in it would be in the condition of some Yankee bee-keepers' heads! Page 803.

THOSE ANSWERS ON SIZE OF HIVE.

It's just nicely a which-and-'tother contest that the 8-frame hive and the 10-frame hive have on page 804. Two dodge the question, and four give answers not readily adjustable with the rest. Of the 22 that remain, two are for 7, eight are for 8, two are for 9, nine are for 10, and one is for 12. In other words, ten go for more than 9, and ten for less. Thought be-sure I should show up lonesome when I sent in my number 7, and, lo, I have such strong company as P. H. Elwood. Page 804.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Getting Extracting-Combs Cleaned.

If I should write a word in reply to Mr. Dadant's comments will it be set down to a woman's desire for the last word, or will it be said that I am following scriptural advice, "Agree with thine adversary quickly?" We are not adversaries, however. Both Miss Wilson and myself expressly said that to have the combs cleaned on the hives is *the best way*, when it can be so done. Probably it can be always so managed in an apiary like his, where everything is done "decently and in order" at the proper time. In the West we get the name of being somewhat slip-shod in our methods, and I must admit that in my own case removing the honey and subsequent operations have to be done when and *how I can*—always a little by little, and so I find myself sometimes where I must, as it were, choose between evils, and it was thinking of others in the same boat that led me to give my choice in the case in point as, "Get the combs cleaned up in the open air rather than store them as they are."

I find I have practiced "the Taylor way" and "the Miller way," too, to a limited extent, all unwitting that I was in such good company.

Mr. Dadant's objections hold good, however. The combs are not repaired. Neither can I see that they are appreciably damaged.

Circumstances alter cases. My apiary is small, and at the last inspection there was not a weak colony in it. Neither is there a neighbor's bee within flying distance. "I am monarch of all I survey."

While I am at it I would like to give Mr. Dadant a word of appreciation. I am always ready to accord respectful attention to anything he writes, and have not the least desire to *cross swords* with him in anything, even although it would then be mine "the stern joy that warriors feel in foemen worthy of their steel." (Mrs.) A. L. Amos.

Custer Co., Nebr., Jan. 12.

Women as Rural Mail-Carriers.

Mr. H. E. Hathaway, of the carrier division of the Post-Office Department of Washington, says:

> "It has been the experience of the Department that women carriers take extraordinary pains to serve their routes efficiently under the most adverse circumstances, and seem to take a pride in overcoming obstacles which would daunt the strongest man."

A woman may not lift as heavy a hive as a man, but in some cases she will stick to her work when a man would be discouraged.

A Sister's Experience With Bees.

I thought I would accept your kind invitation and write a few lines to tell you how much I enjoy the Sister's department in the American Bee Journal; and also tell you of some of my successful failures in bee-keeping.

I commenced handling bees in 1897. My brother, W. D. Phillips, bought 5 colonies of Italian bees that spring, got "A B C of Bee-Culture," and subscribed for two bee-papers. My brother being in very poor health at the time, he did the brain-work and I attended to handling the bees and looked after swarms, and, as he had promised me I could have every swarm I hived by myself, I attended strictly to business; when the swarming season was over I had 5 colonies of my own, and a prouder person would have been hard to find.

We did not secure very much surplus honey that year, but the bees went into winter quarters in fine condition. We wintered them on the summer stands with chaff-trays over them. So we read our bee-books all winter and were ready when spring opened to commence work again, as the bee-fever had not abated the least bit. So he ordered more supplies, and that year we had splendid success. We sold over 400 pounds of white comb honey.

Well, my brother's health kept failing so fast that by the next spring he was scarcely able to go into the bee-yard, but as long as he was able to walk he would come out and sit under the grape-arbor and watch the bees. So I took sole charge of them myself, and would report to him, but I could not give them the proper care they needed, for I had my housework to look after and to wait upon him; but I did the best I could. Things remained in this condition until the spring of 1902, when he died, and left me with 25 colonies of bees to look after all alone. I now have 35 colonies in good shape, and have never had any disease among my bees. Last year I sold over 300 pounds of section honey and 100 pounds of bulk honey.

I love to work with the bees, and very seldom get stung now, although I have had some picnics with them; but I manage to come out ahead, always. I use the Alley queen-trap during the swarming season, and very few swarms get away.

I have never tried introducing new queens, but have just let the bees attend to that themselves, and this I consider one of my failures. I am going to get Dr. Miller's "Forty Years Among the Bees," and study it this winter before I conclude to quit the bee-business entirely. I am 56 years old, and am bothered with sciatic rheumatism, so I don't know but what I will quit if I can dispose of my bees.

This is a poorly written letter, but I have enjoyed the Sister's department so much that I felt it my duty to contribute a few lines, although I expect they will get no farther than your waste-basket.

I wish you and all the sister bee-keepers all the success in the New Year that you may have wished for in the past.

Adams Co., Ohio, Jan. 11. Mrs. Mary A. Ray.

Don't worry; such interesting letters as yours do not find their way into the waste-basket. Please write again.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Moving Bees a Long Distance.

The letter of Charles W. Sager, page 92, is of interest because it relates just how a considerable number of colonies were successfully taken in a car a long distance. Not every one would think of its making any practical difference whether bees were loaded in the front or the back end of a car, but a little thinking will satisfy one of the soundness of his advice, to fasten the bees in the front end; then when severe bumping occurs hives can bump against the front end of the car without fear of breaking loose the fastenings at the center of the car. C. C. M.

Perforated-Tin Separators.

In "Some Expert Opinion," page 10, after looking the answers over, it does seem to me that a separator that is made of tin with perforated holes, like the Root-Tinker zinc, with holes ¼ of an inch in width, and of the same length as used in the zinc, might be used, as it would make a good ladder with the holes in them; and for 4¼x4¼ use separators 4 inches wide. Now, I mean ¼-inch holes in width, as the tin separators could be cleaned by boiling in soap and water. Illinois.

Answer.—Such a separator would work very well if one did not care for the expense. It must be remembered, too, that tin does not work very well where loose separators are desired, as there will be more or less bending or curving lengthwise. With a surplus arrangement that allows the separators to be nailed on, tin is all right.

Feeding Glucose to Stimulate Bees.

Is it safe to feed bees on glucose or corn sugar to stimulate them? We expect to feed our bees a good deal the coming spring, as they were rather short of stores last fall.

MICHIGAN.

ANSWER.—Yes, and no. After bees can fly daily in the spring it is safe to feed almost anything in the line of sweets, but it may not be safe to trust to glucose to keep them from starving, for it is possible that you may find that they will not take it.

What Caused the Death of Queens?

The first part of April I lost 9 queens in three days, 5 of them only 10 months old. I saw one coming out of the hive, fluttering around a few times, and drop dead. What could be the cause of this—poisoning? And from what? No honey was gathered, and no dead brood or bees found in these colonies which were full of brood and bees.

ILLINOIS.

ANSWER.—I don't know. If it were poisoning, the queens alone would hardly have suffered, and you say nothing of any deaths but those of the queens.

Colony Died with Plenty of Honey.

The other day I looked into two of my hives, and found the bees down at the bottom, dead. They had plenty of honey; the colony was about 3 years old. The bees seemed to work well all summer. The trap had been on one hive for two years, I get 80 pounds of honey from it. I would like to know what was the cause of it. NEW YORK.

ANSWER.—The bees may have died from diarrhea, in which case you will find them badly daubed. If the dead bees are dry and clean, it is probably a case of starvation. You say, "They had plenty of honey." That may mean they had honey in the fall but now have none. It may mean that honey was left in the hive after the death of the bees. It sometimes happens that a colony starves to death, leaving a good supply of honey in the hive, but where the bees could not reach it. Up to the date of your letter there has been a pretty long and severe stretch of cold weather, during which it would not be easy for the bees to reach the honey if it was two or three frames distant from the cluster.

Getting Started with Bees.

1. I am greatly interested in bees and want to start an apiary. What make of hive would be the best for a beginner?

2. How many colonies should I start with, and what breed or strain?

3. Any other suggestions. I live near Medina river, have mesquite, sage, or broom-weed, chapperal, etc., for the bees to work on. TEXAS.

ANSWERS.—1. The kind of hive for a beginner is the one that will be best for him when he is no longer a beginner. For it is not an easy thing to change from one kind of hive—especially from one kind of frame—to another. Neither is it desirable. Whatever hive you intend to use when fairly launched, that's the hive to start with.

2. Generally speaking, a beginner should not start with more than two or three colonies, increasing his number with his experience. Special circumstances might make it advisable to start with a large number, as where one is willing to run the risk of the loss of a few colonies for the sake of the experience.

3. If there is any one thing in the way of advice that a beginner needs, it is the advice to read up well. If you do not expect to keep more than one colony, you need one bee-book. If you intend to increase to 50 or 100 colonies, it will pay to have several bee-books and several bee-papers. You can do a lot of reading this winter that will make next summer's experience doubly valuable. Reading a bee-book will be of much use to you; studying several will be of very much more use to you.

Wiring Foundation in Frames in Winter.

I have 1,500 wired brood-frames to fill with foundation. After filling they will be stored in a room where the temperature will be about the same as out-doors. I have plenty of time to fill some now, but am afraid the foundation will break loose from the wires and top-bar if filled during cold weather. Later I will be very busy. Please advise me.

WISCONSIN.

ANSWER.—Fill 'em now. Do the work in a warm room, and while they are still warm set them where they are to stay, and then see that they're not disturbed till warm weather. The cold won't hurt them so long as they are not moved.

Size of Hives and Supers.

1. If you had just 80 Langstroth brood-frames, and could not get any more, and were a husky young man working your bees for comb honey, would you put those 80 frames in eight 10-frame hive-bodies, or would you put them in ten 8-frame hive-bodies for best results, speaking from a practical bee-keeper's standpoint?

2. Suppose you were running 20 colonies of bees for comb honey, and you had one-half of them in 8-frame hives, and one-half in 10-frame hives, the 10-frame-hive super holding 30 one-pound sections, and the 8-frame hive super holding 24 one-pound sections, which of the two sizes would the bees fill the most supers in the season, under the same conditions? ILLINOIS.

ANSWERS—1. I fancy I can see a rather satisfied smile on your face in asking that question, as who should say, "I rather think that will be a pretty hard nut for him to crack." And so it is, especially with the restriction that I am limited to the 80 frames, and allowed to have no more. Now, really, do you think it's giving me a fair show to shunt a question like that at me without telling me anything about what's on those frames? If you set before me the eight 10's and the ten 8's, and say that the same number of bees will be in each hive, I'll take the ten 8's quick. If you say the eight 10's are to have in all just as many bees as the ten 8's, I think I'll take the eight 10's.

2. I should expect the most *supers* to be filled by the 8-frames.

HARDY FRUIT TREES

must be propagated where severe weather prevails. It is with trees as with human beings—the northener can stand the cold better than the southener. Our stock is raised in the blizzard belt of northern Iowa and will stand severest weather. Our success is due to the quality and fruitfulness of our stock and honest dealing. Leaflet on bark grafting, and catalog free

The Gardner Nursery Co., Box 715, Osage, Iowa

The Ormas

There is but one kind of proof which should have any weight in selecting an incubator. That is the percentage of chicks it will hatch and rear to the point of assured life. That's just where the Ormas Incubator leads. It not only "shells 'em out," but it gives them a

THE INCUBATOR THAT SHELLS 'EM OUT

The Ormas

strong healthy start. If you have any doubt—or would like to read some actual proofs, send for my new catalog. It is free and tells some truths in words and pictures no one can deny.

L. A. BANTA

Ligonier, Indiana.

Please mention Bee Journal when writing.

FROM MANY FIELDS

Moving Bees a Long Distance.

On page 9, "Nebraska" asked you about moving bees on the railroad. Having had a little experience in that way of moving bees I take the liberty to write you how I handled them. I cut 2x4 scantlings just long enough to reach across the car, nailed them to the bottom of the car both at the ends and several places to the floor. So much for that part.

My hives are the old-fashioned 9-frame Langstroth, telescope covers. I nailed the caps down with 8-penny nails, and nailed the hive at each corner to the bottom-board. I nailed with 8-ounce tacks a strip of wire-cloth across the entrance, cutting it 3 inches wide, and long enough to reach across the hive front, bent in and tacked well. Be sure on that point. Next I set the hives on the two pieces of 2x4 and nailed them at three of the corners with 8-penny wire nails, leaving the nails up about ½ inch, I could not get at the fourth corner to nail that. Then I put two other pieces of 2x4 across the hives, nailing them at the end and toe-nailing them to the caps. In that manner I placed 84 colonies in one end of a box-car, putting 2x4's on the top of the last and then piling empty supers, etc., on top of the whole of them. I then took some 2x6 and put them across the car against the ends of the whole lot, spiking them solid, three of them straight and one across, making the whole solid. I will say right here, that they must be made so they cannot move, or else all is lost.

In the other end of the car I had household goods, and nailed boards across to keep them from moving. Well, those boards lasted just until the train, or rather the engine, ran off the track, then the engineer stopped the train with the air-brakes, and those boards broke like matches.

Another thing: Put the bees in the front end of the car, if you don't have more than ½ carload, as the sudden stops throw the stuff in the car towards the front end oftener than the other way.

I had all ready for 7 or 8 days, waiting for a car, then it took 7 full days to come 1644 miles by rail, and the next day to get them out of the car, so it was 16 or 17 days from the time the hives were nailed up until they were opened, when I found just 2 of the combs broken out of the frames, and two other hives had the comb bruised so the honey leaked out some, but not broken. One colony swarmed out, but clustered on the side of their hive, and I put them back and they stayed there.

I live about 7 miles from where I have my bees; I went down there yesterday, and they were flying out a good deal, and seem all right to-day. I went west from here, to Outlook, to see a man that has about 150 colonies of bees, and they were flying a good deal. There are quite a number of bees in this vicinity, but most of them are farmer's bees, and the owners don't know or care to take much care of them. I found one bee-keeper who does not claim to spend much time with his bees, but he knows that he can make it pay to handle them, as he reads bee papers and books.

I had to smile while reading Dr. Miller's experience in the days when he was trying to keep bees at a distance, or at long range, as I had tried something in that line myself. I came out here (from central Minnesota) on account of the cold winters. We have not had any winter here yet; the coldest was Thanksgiving week, about 16 to 22 degrees above zero, but the rest of the time it has been mostly 28 to 35 degrees or warmer. We have had a good deal of foggy, cloudy weather during November and December and the first week in January. There is a great deal of alfalfa raised here, the only trouble being that they cut it almost too soon for the honey crop.

Bees are left out on the summer stands all the time here, and no complaint about winter loss.
CHAS. W. SAGER.

Yakima Co., Wash., Jan. 13.

Bee-Keeping in North Dakota.

The American Bee Journal comes along on time and in good shape, and has been a great help to me in the management of bees. I have kept a few colonies for a number of years. With the Journal I can without fail make a success of them through all seasons of the year, winter excepted!

I have put away for the past 6 years, from 10 to 20 colonies, in a bee-house above ground, built the best way I knew how to resist the severe winter of North Dakota. My losses were heavy, only saving about 2 out of every 10 or 12. Last winter I put 3 in the house-cellar to try results; 2 came out fairly good, one poor. The 9 I put in the bee-house all died.

I had grand success in building up these 3, thanks to the American Bee Journal for its guiding staff of writers, giving practical experience. I took them out of the cellar about

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and the name of this paper, we will send you a lot of farm seed samples, including some of above, fully worth $10.00, to get a start, together with our mammoth 140-page illustrated catalog, alone worth $100.00 to every wide-awake farmer.

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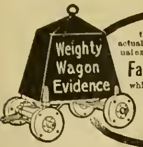
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Everything for the fruit grower best varieties cheap. Free catalog of great bargains—3 new strawberry plants free for 6 names of fruit growers and 2c stamp.

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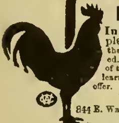
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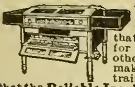
IT IS A FACT

that poultry pays a larger profit for the money invested than any other business; that anybody may make a success of it without long training or previous experience; that the **Reliable Incubators and Brooders** will give the best results in all cases. Our **20th Century Poultry Book** tells just why, and a hundred other things you should know. We mail the book for 10 cents. Write to-day. We have 115 yards of thoroughbred poultry.

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of farmers who have used Page Fence for years, and still buy and use it, for economy.

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Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Four percent off for cash orders in December.

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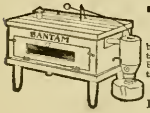

The Bantam

beats 'em all. One customer writes he obtained 51 chicks from 50 eggs. The Bantam hatches every fertile egg every time. Catalogue proves it—sent free.

Buckeye Incubator Co.
Box, 58, Springfield, O.

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April 6 or 8; having plenty of comb honey, I gave them all they needed, and blanketed them well to maintain the heat by manipulating the brood in the brood-nest, and putting another hive on the top filled with comb, and a queen-excluder between; likewise at times lifting up from below frames of brood to top of hive, they became extra strong in bees. The next move was to divide the colony in two. Placing an empty hive a little to one side of the old hive, then opening the hive and searching for the queen, placing the frames she was on in the new hive, then 2 more frames with brood and bees, filling the rest of the space with empty worker-combs taken from the upper hive and a frame with honey. Next I moved the mother hive 6 or 8 inches to the other side, got all the brood gathered to the center, and filled up with the rest of the empty worker-comb. They soon equalized in number of bees nicely. I had sent for a select queen, but being long in coming they had commenced and built queen-cells; I was sure they would kill the new queen, but I cut all the cells out in the morning and after sundown I gave them a good smoking, and in about a half an hour I placed my new queen (in cage) in the center of the brood-frames, just moving the frames apart a little, so I could get the cage dropped in. I tied a cord to the cage so it did not drop too far, and closed up the hive. In about 30 hours I opened it and found the queen out, moving around quietly, and the bees seemed to be well pleased as I was. I soon had 2 strong colonies ready for top supers again, and the honey-flow at hand. I bought in all 4 queens, and used them in like manner, and to get some honey and keep them from swarming I keep the extractor going. I had a lot of empty combs to work on.

The middle of September I adjusted them for winter quarters, seeing they had plenty of honey, leaving them to gather more if they could, and fix up housekeeping for the winter.

About Nov. 8 I put into the house-cellar 10 good colonies and one nucleus, all having good queens, and 2 colonies into a bee-house, trying an experiment again. I cut 2 holes in the south side of the house, put a 2-inch pipe of wood through the wall 18 inches, set the hive-entrance to the end of the pipe, then covered the hive with sacking cloth, and over all with 2 or 3 feet of flax straw. I enclosed the entrance outside with a slide door, and for fear of cold (30 or 40 below zero) I filled the pipe with rags. I may tell later how they came out.

About the surplus honey; I had over 200 pounds, and can sell it at 10 cents a pound. Don't you think I got along well? They kept so strong in number of bees. It took sharp work to keep them from swarming; however, I do not think it is the fault of the bees that they swarm against the bee-keeper's will. Give them room, and care, and there will be very little swarming.

Thanks to the writers of the Journal for pointers about how and when to give empty comb, and better, worker foundation frames in the center of the brood-nest. After all said, I had 2 swarms come off, one did well, but the other left, and I do not know where it went. I would say here, treat the new swarms with a clean, sweet hive and fill with comb or foundation, and a little brood or young larvæ, and lots of shade from the heat of the sun, and they will never think of skipping.

Some one may ask where I got all the colonies I put into the cellar. Well, this way: When I ran across a fine, large queen-cell I would cut it out and put it into a frame of brood—just cut a hole with a pen-knife in the comb and push the cell in it, then place in the parent hive until the queen would be hatched and fertilized, then in a nucleus and build that up with frames of brood. Soon I had a strong colony, yes, and plenty of honey for winter use.

Dr. Miller has my thanks for the many pointers he has given me. I see that he keeps his end well up in the many conventions. May the worthy Doctor live until he is 100 years old—I was going to say, to help us poor fellows out in the bee-business. Well, that is too selfish altogether. But may he live to serve his Savior and God, in leading precious souls to the fold.

If he has any time to spare I would like to

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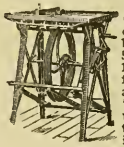
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Read what J. I. Parent, of Charlton, N. Y., says: "We cut with one of your Combined Machines, last winter, 50 chaff hives with 7-in. cap, 100 honey racks, 500 brood-frames, 2,000 honey boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.

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kills all lice and mites. No injury to birds or feathers. Handles any fowl, smallest chick to largest gobbler. Made in three sizes Pays for itself first season. Also *Lightning Lice Killing Powder, Poultry Bits, Lice Murder, etc.* We secure special low express rates. Catalog mailed free. Write for it.

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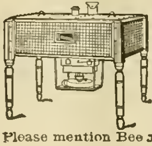
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Zimmer Incubator Co.
Dept. 18, Ft. Wayne, Ind.

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get a few pointers on cellar-wintering of bees. This is the sore question. I am pleased with his advice on the sweet clover question; it does well here, grows immensely, blooms so long, and the bees seem to be on it all of the time. It is well to have the yellow and the white; the yellow will be in bloom 2 weeks earlier here than the white.

Another little wrinkle I tried for warmth in spring and fall, was to make an oil-cloth Take factory cotton (6 cents a yard) large enough to cover the hives all over, less a few inches at the entrance. Heat the boiled linseed oil and with a paint-brush put it on the cloth. When dry, put it on the hive, tie with a piece of twine, and put a stone on top, to keep the cover on. Indeed, I keep it on all summer; no driving rain reached the combs or bees. ROBERT McCRADIE.

Norman Co., Minn., Dec. 26.

CONVENTION NOTICES.

Utah.—The spring convention of the Utah Bee-Keepers' Association will be held April 5, at 10 a.m. and 4:30 p.m. Among other important questions to be considered will be the World's Fair, our State Fair, and the Portland Fair of 1905. We also desire to formulate some plan, if possible, to further increase the fraternal interest for the mutual benefit of our bee-keepers. We cordially invite all bee-keepers to be present. We also invite them without delay to send in their views on these and other topics. The convention will be held in the City and County building, in Salt Lake City.

Salt Lake City, Utah. E. S. LOVESY, Pres.

$12.80 For 200 Egg INCUBATOR

Perfect in construction and action. Hatches every fertile egg. Write for catalog to-day.

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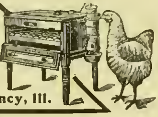

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	Price before July 1st. 1	6	12	After July 1st. 1	6	12
Untested	$ .75	$4.00	$7.50	$ .60	$3.25	$ 6.00
Select	1.00	5.00	9.00	.75	4.25	8.00
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The Certain, Pleasant, Quick and Permanent cure for diseases of Lungs, Heart and Nervous System. Full particulars on application, Free. DR. PEIRO, Specialist, 52 Dearborn Street, Chicago.

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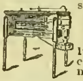
"The removable chick tray is the grandest feature an incubator can have." Mr. Ellison, Poultry Judge, said that about the



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You will save money buying from me. Catalog mailed free. Send for same.

Book orders for Golden Italians, Red Clover and Carniolan Queens; for prices refer to my catalog.

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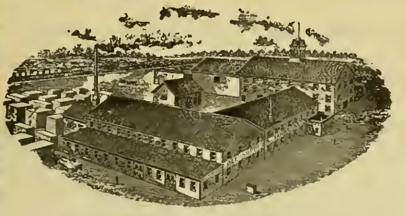

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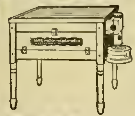

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HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, Jan. 8.—The new year opens with a quiet trade in honey, retailers having usually a supply from the stock laid in to make a good show at the holiday time. Prices are without essential change in No. 1 to fancy comb, which brings about 13c; very little doing in off grades at from 1@3c less. Extracted, white grades, bring from 6@7c, according to flavor and other qualities; ambers about 1c less; especially weak are those lacking in flavor and body. Beeswax steady at 28@30c.

R. A. BURNETT & CO.

CINCINNATI, Jan. 8.—The market on comb honey has weakened, as the supply has been larger than the demand. Fancy water-white, 14c; off grades, lower. Extracted, amber, in barrels, 5¼@5¾c; in 60-lb. cans, ½c more; alfalfa, water-white, 6@6½c; fancy white clover, 7@8c. Beeswax, good demand; 30c for nice.

C. H. W. WEBER.

PHILADELPHIA, Jan. 13.—There has been very little call for honey since the holidays. The first two weeks of the year are the dullest during the season; people become somewhat surfeited with sweets, lessening the demand. The market is somewhat weaker, with quite a few arrivals. We quote fancy comb at 15@16c; No. 1, 13@14c; amber, 12c. Extracted, white, 7½@8c; amber, 6@7c. Beeswax, 31c. We are producers of honey and do not handle on commission.

WM. A. SELSER.

CINCINNATI, Jan. 25.—The demand for honey shows little life at the present time. Have an ample supply, although we are looking for a revival of trade in the near future. Prices are declining, owing to the superfluous quantity in this country. We are selling amber extracted in barrels at 5¼@6c; white clover, 6½@8c, according to quality. Fancy comb honey selling slow at 14@15c. Beeswax, good demand, at 30c.

THE FRED W. MUTH CO.

ALBANY, N. Y., Feb. 1.—Honey demand very light. Prices of comb honey are largely now what the buyers will offer—from 10@15c. We look for better demand when weather is warmer. Extracted doing some better at 7c for white, 6½c for mixed, and 5½@6c for dark and buckwheat. Beeswax, 28@30c.

H. R. WRIGHT.

BOSTON, Dec. 21.—The demand for honey continues good, with an ample supply of comb, and a light supply of extracted. We quote our market as follows: Fancy white comb, 16@17c; No. 1, 14@15c; and practically no No. 2 to offer. Extracted, 7@8c, as to quality.

BLAKE, SCOTT & LEE.

KANSAS CITY, Jan. 28.—There is very little change to note in our honey market since our last report. The supply is still large and the demand fair. We quote: Fancy white comb, 24-section cases, $2.60; No. 1, $2.50; No. 2, $2.40. Extracted, white, per pound, 7c; amber, 6@6½c Beeswax, 25@30c. C. C. CLEMONS & CO.

NEW YORK, Dec. 4.—Comb honey is arriving in sufficient quantities to supply the demand, and, as to the quality, most of the white honey seems to be off color, more or less. We quote fancy white at 14c; No. 1 at 13c; amber, 11@12c; and buckwheat, 10c. Extracted, light amber, at 6c; white, 6½c; Southern, 55@60c per gallon; buckwheat, 5½c. Beeswax, 28@29c.

HILDRETH & SEGELKEN.

SAN FRANCISCO, Jan. 20.—White comb, 1-lb. frames, 12½@13c; amber, 9@11c. Extracted, white, 5½@6c; light amber, 4½@5c; amber. 4@4½c; dark amber, 3½@4c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

Values are showing steadiness, but the demand is slow. There are complaints of doctored or adulterated honey being foisted on the market and interfering with the sale of the pure article.

HONEY AND BEESWAX

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As is customary with all large concerns, we have Agencies or Jobbers in different parts of the United States, where our goods are carried in stock. If you are located near any of those named below it will save you time and freight charges to send your order to them. Where the distance is not so great from Watertown to the Agency, these Jobbers sell the goods at our regular catalog prices:

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Both Increase and Honey. J. E. JOHNSON. **Comb or Extracted Honey?** C. P. DADANT.

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WEEKLY—$1.00 A YEAR.
Published by GEORGE W. YORK & CO., 144 & 146 E. Erie Street.

44th Year. CHICAGO, ILL., FEB. 11, 1904. No. 6.

A Variety of Apiarian Views.

Apiarian Display of J. J. Measer and W. F. Carson, of Reno Co., Kans.

Apiary of L. F. Wahl, of Monroe Co., N. Y.

House-Apiary of George Honess, of Dade Co., Fla.

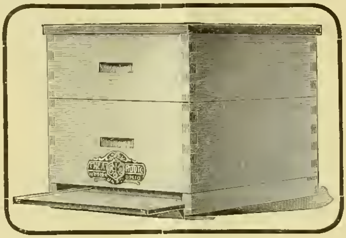
Apiary of John G. Shoon, of Champaign Co., Ill.

(See page 100.)

DANZENBAKER HIVE.

"FACTS ABOUT BEES"

A 64-page book written by Mr. F. Danzenbaker, giving a complete description of his famous hive and directions for using. Full of valuable information. Sent free on receipt of a two-cent stamp to pay the postage. Send for it.



The great popularity of the Danz. hive has brought the shallow frame into prominence. It must be remembered that no other contains the essential points of the Danz.

Danzenbaker Sample Hive Outfit for First Orders.

Five Danz. AD6 sample hives 4 put together ready for paint, including covers and bottoms; one brood-chamber fitted complete as a model, fittings for the other four in flat, with foundation for one inch starters.. $7.00

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The Danzenbaker hive is kept in stock at all our branch houses and principal agencies all over U. S. Our bee-supply catalog for 1904 gives complete prices, and will be mailed promptly on request.

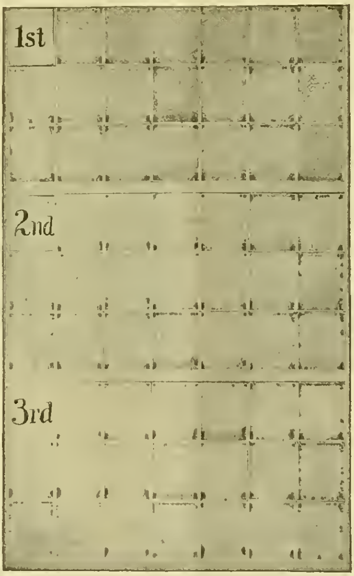
O. L. HERSHISER.

The Best Bee-keepers use it.

Mr. Hershiser, manager of the New York State apiarian exhibits at the Columbian Exposition, 1893, where he won credit for himself and State by his magnificent display of comb honey, was selected as superintendent of the apiarian exhibits at the Pan-American Exposition. Being an up-to-date bee-keeper, and having a keen interest in the latest apicultural appliances, he installed a trial apiary of 10 colonies of working bees, mostly Italians, but with some hybrids, and one colony of black bees. The last named made the best record, storing 111 pounds in a Danzenbaker hive.

The Texas Honey Producers' Association has this day endorsed the 4x5 section super, and favor the Danz. style with H. S. separators. We feel sure we will have orders for you of from 1500 to 2000 Danz. supers. THE HYDE BEE CO.
Floresville, Tex., Dec. 30, 1903.

I have kept bees three years, and owe my success to the Danzenbaker Hive. I shall as soon as possible send you a report of my honey crop. But one thing I know now, and that is, that one Danz. colony gave me over 100 lbs. first-class honey, while a ten-frame Dovetailed hive gave 25 lbs., and the Danz. winters in fine shape without feeding. Both hives had an equal footing.
JASON B. HOLLOPETER.
Union Bridge, Md., Oct. 26, 1903.



PAN-AMERICAN PRIZE HONEY.

From a photo of the 60 prize Danz. sections produced in the State of New York.

First 20 sections, net weight 19 lbs., 11 oz.; stored in Danz. hives, awarded diploma and $25 00.

Second 20 sections, net weight 19 lbs., 9 oz.; stored in Dan. hives, in the trial apiary at the Pan-American Exposition, awarded $15.00.

Third 20 sections, net weight 18 lbs., 13 oz.; produced in Danzenbaker hives, awarded $10.00.

W. Z. HUTCHINSON.

The Choice of an Expert.

Mr. Hutchinson, Judge of Apiarian Exhibits at the Pan-American Exposition, editor of the *Bee-Keepers' Review*, and an enthusiastic and thoroughly posted bee-keeper, was, without doubt, the most capable man who could be selected judge of any thing pertaining to apiculture. His decisions are given greater value because he is fitted to speak from both scientific and practical standpoints.

The Danzenbaker Hive will, I think, take precedence over all others. I am delighted with it, as it is simple and easily manipulated. R. H. PEPWORTH.
Pietermaritzburg, Natal, Nov. 30, 1903.

The Best Comb-Honey Hive.

I am *very very* much pleased that you are willing that I should recommend the Danzenbaker Hive. I have had a great many inquiries about it, and have not felt at liberty to recommend it over our regular hives. At first I was prejudiced against it, but the sales have increased without recommendations, and wherever I have sold they have bought again and praised the hive with extravagant claims, and I am forced to the conclusion that it is the BEST COMB-HONEY HIVE on the market. J. B. MASON,
Manager North-eastern Branch,
The A. I. Root Co.

THE A. I. ROOT COMPANY,

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BEE JOURNAL
Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

GEORGE W. YORK, Editor. CHICAGO, ILL., FEB. 11, 1904. Vol. XLIV—No. 6.

Editorial Comments

Four-Piece Sections Preferred by Some.

The following paragraph appears in Gleanings in Bee-Culture of recent date:

> "It begins to apear that there are many friends of the four-piece section. It is argued that the extra time and cost of putting them together does not cut very much figure, because they can be put up by cheap help during the winter. The main argument in their favor seems to be that they will stay where they are put—that is, when pushed into a square position they will not try to assume the diamond shape."

Of course, this does not ignore the main argument for superseding one-piece with four-piece sections, if such superseding takes place, and that is the increasing cost of one-piece sections because of the increasing scarcity of timber from which one-piece sections can be made. It is just possible that if four-piece sections are as easily obtained as one-piece, and at the same price, a large number may be found who prefer the four-piece. While it may be true that four-piece sections have been thrown out of the catalogs because of the smaller demand for them, it may also be true that a good many have been to a degree forced to adopt the one-piece because the four-piece were not quoted.

Destroying Ants Around Hives.

Mr. H. Potter, in the British Bee Journal, gives his method of getting rid of ants, as follows:

> "I mixed some bee-candy with arsenic, and put it under the hive, placing a piece of perforated zinc over the candy, and a small box over all, to make sure that the bees could not get at it. The effect was surprising! On the first day the candy was black with ants; second day, only two or three to be seen; third day, ants all gone! I have had no more trouble with them this season. Ants eat their dead, and therefore a wholesale poisoning had been set up by them devouring their dead comrades."

Drones as Gatherers—Can It Be?

A writer in Wegweiser reported that he had seen drones working on flowers. The editor doubted. Afterward Editor Freyhoff saw the same thing with his own eyes. There was no mistake; a drone was working on the flowers, head down, scraping with his legs like a pollen-gathering worker, and pollen was on his legs.

Is it possible that drones are yet to mend their idle ways?

More Colonies Rather Than More Work.

In place of spreading brood and stimulative feeding in spring to increase the number of bees, E. D. Townsend says in the Bee-Keepers' Review, that it is better to have a few more colonies and avoid the extra work. The point is worth considering.

Solar Wax-Extractor—Get a Big One.

The editor of the Australian Bee-Bulletin thus advises:

> "If you get a solar extractor get a big one. Less than three feet by two, and six or seven inches deep, is foolishness. We don't sell them; we give our experience."

Transmission of Traits in Bees.

That interesting writer, Dr. A. W. Smyth, says in the Irish Bee Journal:

> How is it possible for the queen to transmit instincts acquired by the worker-bees, unless they are in some way transmitted to her by the workers? There is but one way in which this can be done.
>
> Worker-bees occasionally beget drones, and these drones transmit the instincts of the worker-bees through the queen. The intelligence of the worker-bees would be of limited use if there were no means of transmitting it from one generation to another. This means of transmission is acquired by laying workers, whereby the drones, so produced, become the means of communicating an hereditary instinct through the queen-mother.

If this be true, some of us are badly out of the way who think laying workers an unmixed evil, only to be suppressed under all circumstances. But it will take considerable proof to make it generally believed that the drones of laying workers are at all necessary in the matter of transmitting traits. Indeed, Dr. Smyth himself says:

> "That the arguments briefly stated in this article are suggestive and not conclusive, the writer is well aware."

So we are likely to go on suppressing laying workers as so many pests.

Barrels or Cans for Honey in America.

"In America honey is kept mostly in barrels," says Praktischer Wegweiser. If our good German friends were to see the piles of tin cans that are used here for honey they might change their minds. We should say that at least three-fourths of all the extracted honey marketed in this country is put up in tin cans.

The Would-Be Inventors of Beedom.

A leading writer of sacred writ once said, "Of the making of books there is no end." Almost the same thing can be said of the making of new hives. It is getting to be almost a fad in these days for certain bee-keepers to have a hive of their own. Of course, each new hive gotten up (by them) is far superior to any other, no matter whether it is half so good as some that have been thoroughly tried by the majority of bee-keepers! The strange part of it all is, that the would-be inventors of these new fads in hives are so queer as to think that bee-papers ought to devote half of their space to pushing the sale of these new creations. Yes, certain of them have gone so far as to order their bee-papers discontinued because the editors did not see it their duty to insist upon the bee-keeping public using their new hives. No doubt the discontinuers thought they would kill the bee-papers if they stopped subscribing for them. But they might be surprised if they knew the papers *they* discontinued were having more readers all the time.

What surprises us, is that the wise inventors of new hives and other apiarian fixtures do not use the advertising columns of the bee-papers. If they wish to make any money out of any of their inventions, they should be willing to pay for the space used in the bee-papers to tell bee-keepers about the good points in the things they have for sale. We have had sufficient experience to know that a bee-paper is far from being a charitable institution. We have yet to find any bee-paper publisher who is able to be a philanthropist. Of course, we know that most of them are generously inclined, and doubtless do their share when it comes to helping a worthy cause, but just *why* they should be expected to run their papers for the benefit of certain would-be inventors and their fads we have never been able to discover. We usually have been willing to announce to the bee-keeping world the advent of new inventions, but after having done that we ought not to be expected to see to it that the inventors make a fortune out of their notions—and some of them queer notions at that.

In publishing the American Bee Journal we endeavor to keep in mind "the greatest good to the greatest number." We believe we are succeeding by following this line. But, no doubt, there are a few who are so selfish as to think they are the only people, and that if *we* do not come to their ideas of things, they will simply discontinue their subscriptions, and then the old American Bee Journal will go to smash. They seem to forget that the world is wide, that there is room for all, and that, perhaps, after they and we are dead and gone the American Bee Journal will still be holding aloft its conquering flag, and still be leading the hosts of heedom on to victory.

Formalin for Treatment of Foul Brood.

Reports of failure with this drug have been unpleasantly frequent of late, shaking the faith of many, no doubt, who have been hoping great things from it. Very likely they have thought, even if they did not say it, "After all, what could you expect? Spores of Bacillus alvei are notoriously hard to kill, and it is asking a good deal of any drug to compass their destruction when protected by a full cell of honey." Now comes Prof. F. C. Harrison, a man whose word has weight, saying in the Canadian Bee Journal: "I have actually noted a destruction of the spores of B. alvei in cells filled with honey." That is certainly reassuring. Prof. Harrison adds further:

> In cases where the diseased matter has become dried up and adhering to the side of the cells, I am confident that formalin gas, if properly applied, will kill the spores, even when situated in these dried-up masses. However, it might be advisable in such cases to sprinkle the combs with water, as the disinfecting power of the gas seems to be greater when there is moisture and some warmth (not over 100° F.) present.
>
> I think that a large number of failures have been due to lack of proper precautions in obtaining formaldehyde of proper strength, or in not disinfecting in tight boxes, or in not leaving the gas long enough in the disinfecting chamber.

Miscellaneous Items

The Wisconsin Convention was held at Madison, Feb. 3 and 4. It was a good meeting, and well attended. Officers for the ensuing year were elected as follows: President, N. E. France; Vice-President, Jacob Huffman; Secretary, Gus Dittmer, of Augusta; and Treasurer, F. Wilcox. It was our privilege to be present and enjoy the meeting. We may have more to say about it next week.

* * *

The Missouri State Convention was held Dec. 15, 1903. An interesting session was held. The following were elected officers for the ensuing year: President, J. W. Rouse; Vice-President, Emil F. Nebel; Secretary, W. T. Cary, of Wakenda; and Treasurer, F. K. Thompson. A statistical report for 1903, so far as gathered, showed 36 bee-keepers; with 1200 colonies, spring count, and nearly 1800, fall count; 54,800 pounds of comb honey, and 48,000 pounds of extracted honey; and about 1000 pounds of beeswax.

* * *

A Foul Brood Law is what Ohio bee-keepers are asking their Legislature to pass this winter. We have received a copy of it, but it is almost too long for publication. Every bee-keeper in Ohio should write to his State senator and representative at Columbus, and urge them to work for the Bill and vote for it. It ought to be passed at once, and we believe it will be if Ohio bee-keepers do their duty. Wm. J. Gilliland, of Silverton, Ohio, the secretary of the Hamilton County Bee-Keepers' Association, can give any information that may be desired in reference to the matter.

* * *

The House-Apiary of George Honess appears on the first page. He wrote as follows concerning it:

> I have two house-apiaries just alike, 3 miles apart. They hold 75 colonies each, 30 facing south, 30 north, and 15 west. On the east side is the entrance. I like to work with bees in a comfortable place, better than in the sunshine or rain, and it gives all the hives protection alike, as I found out when we had the last storm; others in the neighborhood were pushed off the stands, covers all off, and bees drowned and killed. The house is built on eight 4-corner water-tanks, made from cement and sand. It keeps out ants and other little animals. The hives are all double, each with 24 frames one foot square. It works all right. Bees have a cool place in summer, and don't lay outside. There is plenty of ventilation. When I work on the first row I stand on the ground, or can sit if I like to, in position the same as sitting on a bench, because I left room to work clear around between the floor and the first row (20 inches), but at the second and third I have to stand on the floor. Each hive has a number on the little door in the back.
>
> Bee-keeping is not the only work I have to do. I am a truck-farmer, shipping pineapples and tomatoes, and have to cook for myself besides. That is what makes me think so often about the sisters who are interested in bee-keeping, and who make the future still sweeter.
>
> Dade Co., Fla., Oct. 31. GEORGE HONESS.

* * *

Mr. N. Young, of Hardin Co., Iowa, writing us Jan. 14, said:

> EDITOR YORK:—I herewith enclose a poem I clipped from a newspaper, that I think would be nice for bee-keepers to read in remembrance of the old veterans or loved ones who are passing away.
>
> N. YOUNG.

The poem referred to is the following, which is indeed a beautiful one, and we are glad to give it a place here:

Auld Lang Syne.

It singeth low in every heart,
We hear it, each and all—
A song of those who answer not,
However we may call;
They throng the silence of the breast,
We see them as of yore—
The kind, the brave, the true, the sweet,
Who walk with us no more.

'Tis hard to take the burden up
When these have laid it down;
They brightened all the joy of life,
They softened every frown;
But, oh! 'tis good to think of them
When we are troubled sore!
Thanks be to God that such have been,
Though they are here no more.

More homelike seems the vast unknown,
Since they have entered there;
To follow them were not so hard,
Wherever they may fare;
They can not be where God is not,
On any sea or shore;
Whate'er betides, thy love abides,
Our God, for evermore.

—JOHN WHITE CHADWICK.

* * *

The Picture of a Fair Display, shown on the first page, is referred to as follows by Wm. F. Carson:

> I send you a photograph of the honey and bee display of J. J. Measer and Wm. F. Carson, at the State Fair, Hutchinson, Reno Co., Kans.
>
> J. J. Measer got $43 in premiums—on comb honey, $10; on extracted honey, $5; bees in observatory hives, $10; nuclei, $5; beeswax, $3; and bee-supplies, $10.
>
> Wm. F. Carson, on full colonies of bees, $10; second on honey, $5; and second on supplies, $5.
>
> Mr. Measer has about 100 colonies of bees, and is the largest bee-keeper in the county. I have 28 colonies. Bees are becoming quite plentiful in this part of the country. They did not do well the first part of last season; owing to the wet and cold weather, colonies grew lighter instead of heavier until about the first part of July. I got but one new colony during the season, and very little alfalfa honey, but the fall crop of heartsease was quite good. WM. F. CARSON.

* * *

The Apiary of John G. Schoon is pictured on the first page this week. He wrote us about it as follows:

> I am a great lover of bees, and there has been only about 10 years of my life that I was not with bees. In 1898 I started in again with one colony in a box-hive, and increased to 34 colonies, which I have at this time. Last season I started in with 13 colonies, spring count, increased to 34, and produced 2137 pounds of comb honey, actual weight. My bees are well cared for, as you will notice in the snap-shot picture taken by myself, off one of my sheds. I have two sheds, 48 feet long.
>
> I am a coach-builder. I attend to my bees mornings and evenings, and during my absence my wife attends to the swarms and such things as may be necessary.
>
> I am a friend of the American Bee Journal.
>
> JOHN G. SCHOON.

Contributed Articles

No. 1.—Getting Both Increase and Honey.

BY J. E. JOHNSON.

On page 792 (1903), W. W. McNeal not only criticises my seemingly "wildcat plan" of bee-keeping, but gives my article on page 600 a thorough overhauling, but does it in a fair, sensible manner. On page 714, Mr. Hasty very kindly calls my attention to the fact that I am teaching the children to play with fire. Yes, "I acknowledge the corn;" such is not the proper way to get both increase and honey.

First, let me ask Dr. Miller's pardon for trying to answer a question in his department. I, however, emphatically disagree with Mr. McNeal and Mr. Hasty on several points. My total crop the past season was as follows: 2300 pounds of comb honey, 700 pounds of extracted, and 20 pounds of wax. I also have 100 shallow combs built during the season; and about 100 section-boxes of empty comb, some of which the bees emptied, and some I extracted. The honey from these sections was counted in the above 700 pounds, so in honey alone I got an average per colony of 250 pounds, spring count, and increased to 55 colonies—all good colonies but 2, that are not very strong. I reported this to the Editor some time ago, but did not want it published, as I did not think people would believe it. It is not very pleasant to have one's statements doubted when I know they are true; but I offered to pay the expenses of the Editor both ways, if he saw fit to come and investigate, and found I had exaggerated. Now I will ask for considerable room this time, and in the future leave the space for other more experienced and better able writers. I have plenty to do.

I have kept bees altogether about 20 years (selling out several times and starting anew in different localities). I shall try to tell why I do so and so. It is not my intention to brag, but first let me contradict Mr. Hasty's statement to some extent, "Not possible to know of a season's peculiarities before they arrive." Is it possible for us to know anything of the future except as we judge from our experiences of the past? All our future work will be done properly only when we use the knowledge gained by past experience; if we should forget all our past we would be poorly fitted for the future.

Two years ago was a very dry year, and all cattle-owners had too many cattle for their pastures, and had a very hard time to get feed. As soon as possible they sold off a lot of their cattle and determined never again to be caught with too many cattle for their pasture. Last year (1902) was a very wet year, and the white clover made a good growth, and this year the pastures were not overstocked with cattle, and, consquently, not pastured so close. Now, judging from past experience, I expected a dry, or medium dry year, owing to so much rainfall last year, and I have not as yet seen a good crop of white clover (from old roots well supplied with tubercles) in a dry or medium season but what we had a good honey-year. So I was as certain of a good honey-year as I was of anything in the future.

Here we have hilly land, north as well as south slopes, also bottoms and big slough in the pasture, so clover will last quite awhile, beginning on the southern slopes and blooming late in sloughs and northern slopes. I live near a small river, ½ mile to bottoms on the south, ¾ mile to the river on the east, ½ mile to a creek on the west, and about 1 mile to a creek on the north. Along these streams are lots of soft maple, box-elder and elm. First blooms maple, then elm, and afterwards wild gooseberry and box-elder; then wild plum, Japan plums and pears, then apple, and last, but not least, quite a lot of wild crab-apple; then raspberry, both tame and wild, and quite a lot of wild blackberry, so we have a nice, continuous bloom in spring, but bad weather often hinders bees from working, and for this reason they should be fed in spring to keep up a continuous brood-rearing, and if properly done you may have good, big, roaring colonies for the clover flow—if you have the clover. Only once have I had bees swarm before white clover came, and that was last year; 2 colonies swarmed on raspberry bloom last year.

Now, this year (1903) I took pains to get my colonies very strong early, by giving an extracting super to rear brood in over frames, and by feeding; or, in other words, I reared a lot of bees and brood on early bloom and sugar and water, and put them to work in the supers right in a good white clover flow. No, Mr. McNeal, I would not take your good combs, or full sheets, as a gift to hive big swarms on in a good honey-flow; they are all right for small swarms or nuclei.

I can nearly always depend upon smartweed and other late bloom for winter supply of honey, and sometimes a good supply of surplus, and this I had in view, as that rainy week in June caused corn to get weedy, and when a little smartweed starts in a hill of corn, in a wet spring, it is there to stay, and makes a big plant after corn is laid by; and if we would have had a good smartweed flow for 2 or 3 weeks I would have had 5000 pounds instead of 3000, and possibly even more, as I then had 50 colonies ready for it with many partly-filled sections and empty shallow combs ready for filling; but in this I failed, owing to cold rains and the overflowing streams destroying smartweed (some call it heartsease). But if I had had a good fall flow I would not have had the courage to report it.

When my other article came out I was surprised to see that I thought I had taken off only 90 sections, and had 90 more soon to come off. I should have said that I had taken off 90 sections, and that I *thought* there were 90 more soon ready to come off.

I have 2 little boys, 4 and 7 years old, who are endowed with a great tendency to ask questions; also 3 girls that are older, and are practicing music, so, sometimes, "the old man" gets a little "rattled," especially in swarming-time. I had not inspected that colony for awhile, and when I did look after them I found that they had not been doing as well as expected; they, I think, had been superseding their queen, and the honey had been going in the brood-chamber, and sections were being capped before full. So all I got above the 90 first sections were second-grade and unfinished sections, but that was somewhat my fault.

Mr. McNeal speaks of young queens gathering honey. None of my queens gather honey, or at least I never catch them at it; but their colonies do. It was from these second, as well as first, swarms that I got most of my surplus. With me, after-swarms very seldom come out until 12 days after the first, and with 8 Langstroth frames and 8 shallow frames pretty well filled with brood hatching out daily, those second swarms were very large, and a good percent of those bees were young, and by using only comb-foundation strips they spent their energy in storing honey in the supers, not in wholesale brood-rearing, but went at brood-rearing gradually; furthermore, they stored little or no honey in those brood-combs; the young queens were soon fertilized, and followed those comb-builders pretty close. Those brood-combs were built for brood at that time. They had no intention of swarming then—why should those bees want to build a lot of drone-comb for a young, fertile queen to deposit her eggs in immediately? They did build some drone-comb, but not a great amount; some of them more than others. I am not afraid of some drone-comb. I give the bees credit for a good deal of sense, and if they want to build some drone-comb under such conditions then it must be for some good. I believe some drones are necessary in a hive of bees whenever the bees want them, if for no other reason than to satisfy that desire; an all-wise Creator gave them that desire or instinct. He is wiser than I.

The 12 colonies had combs containing considerable drone-comb built on strips the same way, and reared plenty of drones. When I find combs containing a large amount of drone-comb I take them away and give foundation, when I know the queen wants immediately to fill that comb with worker-eggs, or, rather, when I think she does. I don't want drone-comb in the center of the hive, and when I find it there I move it to the side until I take it out.

In regard to wiring good combs in shallow frames, or full sheets instead of strips, Mr. McNeal is entirely right. I had not the comb, and feared I should run short of foundation before I got more; furthermore, I have always tried to make the bees pay for their own supplies (last year was not a good year), still that was poor economy; but when I put on this super the queen was ready to lay in them, and the bees had very little if any thought of swarming or superseding their queen; the result was mostly worker-comb; some have little or no drone-comb, although some have quite a bit, but only a very few have much drone-comb. I expect next year to use only the best combs and will discard only 10 or 12 of them.

In regard to hiving bees in a hive containing only one super, then in a day or two giving another next to brood-frames, probably I did not express myself right when I said chock-full of bees. I meant the super was full, and a large cluster in the brood-chamber which hung to the floor of hive; of course the corners of body were not full. By using only one super the bees began to draw comb in both super and brood-frames, then by slipping another super between would stretch the bees out, as it were, and as they had begun to draw comb in brood-frames there was no tendency to store pollen in sections. Remember that the weather was warm at this time, and getting warmer, and in warm weather the bees can be induced to cover a much larger space and work well than what it takes in which to cluster. The bees can still be clustered thickly in brood-chambers containing no comb if you have a large entrance, but when given another super they will not hang in a big cluster on these strips, but many will go to work in the super immediately over strips in the brood-chamber, which will soon contain eggs, and, as I said before, that brood-chamber will be built for immediate egg-laying, and will not contain an enormous amount of drone-comb. The honey will go into the supers, and in a little over 3 weeks some young bees will begin to hatch, and soon they will do inside work, and brood-rearing will not be at the expense of the best honey-flow. If swarms are hived on comb, that queen will lay to her fullest capacity, and soon they will consume nearly all the honey they can gather to feed brood; not only so, but they spend their strength and energy in rearing a lot of bees that will probably not be field-workers until the honey-flow is on the wane. Then what have you? Even if the honey season is not nearly over, the bees will have a tendency to stick to the brood-chamber and not work so readily in supers; at least that is my experience.

Knox Co., Ill., Dec. 17, 1903.

No. 1.—Comb or Extracted Honey—Which?

BY C. P. DADANT.

TO the reader who wants his answer in two words, my reply will be short. My preferences are for producing extracted honey. But there are so many things to be considered in the decision of a preference for one or the other mode of bee-culture, that I wish to explain at length my reasons, so that I may not lead astray those who are still undecided. I will therefore deviate from my customary rule of writing short articles, and will occupy two or more articles with this subject.

I will begin by comparing conditions as they were when I began bee-culture, with present conditions. At that time, some 35 years ago. the honey-extractor had just been invented, and bee-culture was as yet in a very imperfect condition. The honey was produced in little boxes weighing from 5 to 8 pounds each. The best looking boxes were made with only the top and bottom of wood and four little posts at the corners to which four panes of glass were fastened. The regular Langstroth hive was supplied with six of these boxes, and they did not admit of tiering up. About 36 pounds of honey was as much as any colony was supposed to be able to store. The rougher hives had boxes with only one side of glass, but the careful bee-keepers would place guides of white comb glued to the inside top of such boxes, next to the glass, in order to secure a smooth-looking comb, straight and neat, for a better showing. Otherwise the bees might have built their combs diagonally, and the box, when filled, would not have presented such a fine appearance. These boxes had but one small hole for the bees to enter, and were slow to fill.

The first section-boxes that I can remember for the production of comb honey, were gotten up by Gen. Adair, of Kentucky, who made a super composed of sections two inches wide and fitting against each other. These sections were much larger than anything we have to-day, as they usually held about three to four pounds of honey. Comb foundation was not yet in use, and in order to secure straight combs it was necessary to glue small bits of white comb from a previous season to the top of each section. But a great deal of honey was sold in this shape, and at good prices. Mr. Harbison, and the other California bee-keepers, were the first to make a smaller section with a triangular top-bar, so as to secure straight combs without having to use guides. Then a little later A. I. Root suggested the making of a one-pound box for retailing, and also about that time began the making of foundation, and the present system was thus introduced to stay.

We had very quickly found out that the little-box system, with room for 36 pounds on the hive at one time, was inadequate. Although not located in the best of honey-districts we discovered that, when the honey was in the blossoms, a strong colony could use more space than was generally thought ample. We adopted the Adair super at once. This, of course, enabled us to give the bees all the room they wanted. but several things militated against the production of comb honey as compared with extracted honey in our experience. We noticed that the bees swarmed a great deal more when they had to build their combs than when combs already built were furnished to them in ample quantities.

It is a now positively accepted fact that a strong colony of bees may harvest as much as 20 pounds of honey in a single day. If room is not found for this honey, some of the bees have to remain loaded until room is found, and are therefore kept from going to the field. Though it is a fact that this honey is very watery, and evaporates perhaps as much as 25 percent within a couple days, yet the bees find themselves crowded for room unless many empty combs are within their reach. They then have nothing to do but hang in clusters in the empty space till the honey which is contained in their honey-sac is digested and changed into wax. This is an inducement to swarm, and that is why so many colonies swarm with space still in their reach.

There are also other causes of swarming, even when there is empty comb in the hive, but this question has nothing to do with the present subject, as it is an exceptional occurrence.

What I have stated above shows why colonies producing comb honey will swarm much more readily than those producing extracted honey. In the first case, they must be crowded for room before they will build combs, and will then crowd themselves and the queen both. In the second case, if the extracting method is properly followed they will have empty combs at their disposal at all times, and never need to crowd themselves or the queen. It is true that bees produce beeswax, willy-nilly, during a good season, but the quantity thus produced is never great, and is needed to repair the combs that are given them to add to their depth, and to seal them when the honey is thought by them ripe enough for sealing. In a hive provided with a full stock of extracting-combs, there are always some empty combs, some combs partly full, and some sealed combs in one or the other of the supers.

I said just now that the bees produce wax, whether they will it or not, and this is confirmed by the experience of scientists who have discovered wax-scales formed on bees that were caught in the harvest-field. But the rapid production takes place only when they hang in numerous festoons in the empty portion of a hive. That is why a natural swarm builds so readily, nearly all the bees having become wax-makers. Their stomachs are full, and in order to empty their sacs they must first have the structure in which to deposit the honey.

So the bees that produce comb honey swarm much more readily than those that are supplied with empty combs from previous seasons, that have been emptied by the extractor.

In a large apiary, when natural swarms are not desired, when, in fact, we are wishing to devote all the energy of the bees and of the apiarist to the ultimate aim of bee-keeping—the production of the best of sweets—it becomes natural to want to reduce swarming to its minimum, and that is one of the reasons why we have adopted the production of extracted honey.

But I have several other reasons which I will give in another number.

Hamilton Co., Ill.

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we are using it ourselves.

PRICES, prepaid—Sample copy free; 10 for 20 cts.; 25 for 40 cts.; 50 for 70 cts.; 100 for $1.25; 250 for $2.25; 500 for $4.00; 1000 for $7.50. Your business card printed free at the bottom of the front page, on all orders for 100 or more copies. Send all orders to the Bee Journal office.

See Langstroth Book Offer on page 111 of this copy of the American Bee Journal.

Convention Proceedings

THE COLORADO CONVENTION.

Report of the Proceedings of the Colorado State Bee-Keepers' Convention, Held in Denver, Nov. 23, 24, and 25, 1903.

BY H. C. MOREHOUSE, SEC.

(Continued from page 89.)

Next on the program was the following paper by Mr. W. L. Porter, on

RECEIVING AND PACKING HONEY FOR CAR-LOAD SHIPMENT.

Most of the honey in Colorado is produced by bee-keepers that are making a business of it, and through the long summer months, as he is toiling at his work, he is constantly turning over in his mind, How much cash will it be possible for me to realize for my season's crop of honey? Then the question arises with him, How can I convert my honey into the most dollars and cents in the shortest time with the least labor and expense?

The honey-business has reached such a large proportion in Colorado that it is possible to market but a small portion of the honey in our own State. Then, the second question presents itself, which is a very important one, How can we lay our honey down in the markets of the Eastern States with the least expense, and get the largest possible price? This, I answer, can be done best by co-operation. We find by observation for a number of years, that the first honey ready for the market brings the highest price. My knowledge on the subject has come mostly through my official connection with the Colorado Honey-Producers' Association, and those working outside of the Association will probably coincide with what I have to say.

The inquiries for honey in car-lots for August and September are numerous, and the demand is greater than we can fill, as the supply is not as great as it might be on account of the slowness with which bee-keepers get there honey in. As the season advances, the calls for Colorado honey are less, and the price weakens. If any of us are fortunate enough to produce a car of honey, we can not have it ready for shipment in August, as it is impossible to have it all from the hives before Sept. 1st, and then it takes time to handle it and case it ready for the market.

Then, if we wish to avail ourselves of the best market, we can only do it by co-operation—each bee-keeper bringing his honey as fast as he can get it ready to a common point, and by so doing we can bring together a car at the earliest possible time. In this way a car may be shipped in the last part of July, a number of cars in August, and so on through September and October, until the larger portion of the crop has been sold. The bee-keeper that gets the most of his honey early is the one that will realize the most for his crop; the one that gets it fairly distributed through the entire season, is the one that will get the average price; and the one that gets his crop all in late will get the minimum price. I base these assertions on facts gleaned from an experience of from six to eight years, and the conditions are such that it is bound to be the same in the future.

The bee-keeper that sells part of his honey early gets part of his cash early, which enables him to meet his outstanding bills that have accumulated.

Then assuming that all wise and up-to-date bee-keepers will adopt the co-operative plan of marketing honey, I wish to lay before you some plans for successfully gathering together and loading cars in a manner that will be successfull, and will give satisfaction to ourselves and also to the buyer and receiver of the goods. I loaded the first car of honey shipped from Colorado, which was in January, 1891; since that time a great many cars have been shipped, and a good many of them I have had the supervision of, receiving and loading the cars, and I find generally it is pleasant and agreeable. But sometimes it is not so easy, and there are difficulties that do not need to exist. If we all knew how to get things in shape, and would act accordingly, many of the difficulties of car-loading would disappear.

The first step, then, is to get the honey ready for the market as early as possible. The bees in this part of the State commence to finish up supers about July 10, and the sooner the super is taken off the whiter will be the honey, and the higher will it grade. The bees should always have plenty of room, but not too much room. Many bee-keepers seem to get excited when the honey-flow comes, and rush on too many supers, and on this account I often find whole crops of honey running light. So it is not satisfactory, even in second or No. 2, when the producer thinks it ought to be No. 1. This, I would say, is a common trouble, and I want to caution you all not to tier up too fast. Give the bees room enough, but not too much.

Another common trouble is bad grading. White and amber honey are mixed; this makes a contrast, and is sure to throw the whole lot into No. 2, when a large portion would grade No. 1, if kept separate. Put the white honey in one case, the next shade in another, and so on up to the darkest. In this way you will get more No. 1 than if you mix it.

Have all clean, new cases. The double-tier 24-pound case is becoming more and more in favor, not only in this market, but in the East. Some of our Eastern customers, this season, have requested that the honey be shipped in the double-tier case. The manager of our Colorado Honey-Producers' Association has cited a number of instances where the flat and single-tier case has had the greater amount of damaged honey. The cases are light and thin, with a large surface on the top on which objects may be thrown. They are of thin lumber, and give cornerwise, and the honey is wrenched in the comb.

It would be far more satisfactory in loading if each community would use a case made by the same factory, so that they would be uniform in size. Or, it would still be more sensible if all factories would make a uniform, standard case. As it is, each factory has a number of variations, some short and some tall, so that there is from one-half to one inch in variation, and when you have put in 22 or 24 tiers, these variations make considerable, and you find your load getting out of skew, and work is not so satisfactory.

When you take your honey to the car or warehouse, take a full load of No. 1 or No. 2, if possible. This is quite necessary if you have to drive on a wagon-scales to get weights. If you must take No. 1 and No. 2, place it in the load so that No. 1 will be at one end and No. 2 at the other, with paper or cloth between so as to make it easy to separate.

It is very important to have your honey in the warehouse as soon as possible, and if you are so situated that you must deliver at the car, then have it ready and classified at home so the car can be loaded on very short notice. Don't wait until the car is on the track, then commence to scrape and case, expecting to get it all ready before the car is billed out. When parties do the work in that way it is apt to be done hurriedly, and poorly done, and not satisfactorily.

I wish to say in conclusion, that I see great improvement all along the line each year, and no matter how much honey we produce, if the work is done rightly, and we produce a good article, there will be a demand for all. As each good lot of honey goes on to the market it is a glowing advertisement for more. Thus, the demand grows, as well as the supply. W. L. PORTER.

Mr. Gill—The honey-producer doesn't stop to think that the honey loses its identity in loading on the car, and that the shipper is held responsible. There are duties of the producer as well of the shipper. Eastern buyers say Colorado honey ships the best.

F. Rauchfuss—Have you no way of finding out and identifying the different lots in a car, so as to trace them?

Mr. Gill—No. I can notice a great improvement of late in the honey brought for shipment.

H. Rauchfuss—First, produce a first-class article, then use a nice, clean shipping-case, then grade very closely. There's the difficulty. Many do not know what the first grade is. Some produce all dark honey, and think it is first grade. Some have nice honey mixed in with inferior, and think it is all first grade. The man in charge can't afford to take out every section and examine it, but in some cases he has to regrade, and charge the producer for his trouble.

A Member—I put my own name on every case of honey.

F. Rauchfuss—The marking of every case is objected to by buyers. There is not so much objection to the Association mark, but they object to having the producer's name on, because of the custom of many retailers of writing directly to the party whose name appears on the cases. We have adopted the plan of giving every member of our Association a number, and putting that number on each of his cases, instead of his name.

Mr. Porter—Variation in size of shipping-cases makes a great difference in loading a car.

A committee, consisting of Messrs. Gill, Rhodes, Booth, and Aikin, were appointed to bear the condolence and sympathy of the State Association to E. Milleson, a former president of the Association, who has been confined to bed for five weeks as the result of a fall.

SELF-SPACING BROOD-FRAMES.

"How many prefer self-spacing frames in the brood-chamber?"

(Many in favor; two opposed.)

Mr. Morehouse—I voted against them, but I have not much choice. If you fill a hive with self-spacing frames, and there is no follower, it is hard to get the first frame out.

H. Rauchfuss—If Mr. Morehouse will leave a space in the first place, he will still have that space. In hiving swarms on non-self-spacing frames, and carrying the hives afterward to their position, the frames may shift a little, and one may forget to space them again.

Chas. Adams—That's the only advantage the self-spacing frames have, and that covers the whole subject.

Mr. Morehouse—I make my hives enough narrower to leave no space for a follower.

Chas. Adams—There are four different widths of hives in use.

Mr. Porter—I planed the edges off of my Hoffman frames last spring. I would rather have a few frames get out of place than to have the Hoffman frames.

Mr. Aikin—When you put a follower in an 8-frame dovetailed hive there is room for another, and nearly enough for another frame. But in Lewis' 10-frame hives the followers go in too tight. The 10-frame hives can be manipulated without a follower, but the 8-frame hives must have them. I would put out a follower that would stand a little prying. The Root followers are thin, flimsy things that are ready for kindling the first time they are used. The ends of the Hoffman frames should run far enough to rest on the rabbets on all occasions. I want long top-bars.

F. Rauchfuss—In the 10-frame hive a division-board is furnished, but it is not intended to be used with the full number of frames. Two little sticks are furnished with the Lewis hive for nailing at the ends of one side, and if they are in you can't get the division-board in.

Mr. Working—My difficulty is in getting both kinds of frames mixed. I would prefer uniformity, whichever kind the frames are.

Mr. Gill—As soon as the follower is left out the Hoffman feature is lost. If the Hoffman frame is used, by all means use the follower.

INCREASE METHOD—INTRODUCING QUEEN TO QUEENLESS COLONY.

"What is the best and cheapest method of making increase?"

Mr. Spencer—Natural swarming is the best method of increase.

"In introducing a queen to a queenless colony, which will produce the best results, a queen laying to her full capacity or a young queen just beginning to lay, the queens having been received by mail?"

A Member—It varies according to the season.

WORKER-COMBS FROM STARTERS.

"Can nice worker-combs be secured by the use of starters only?"

H. Rauchfuss—That is the only way to get a good comb, though fairly good combs may be had with foundation.

Mr. Gill—Eastern editors claim nice combs are impossible without foundation. But with starters I get more perfect combs. The rows of cells near the top-bar are not elongated as with foundation. I never had any trouble when the conditions were normal, and don't see why it can't be done. Many people hive a little, incomplete swarm, and, of course, they fill out the hive with drone-comb. The combs should be built while the incentive for comb-building is to get workers only. If there is storage-room in the super, 95 percent of the honey will be stored there. If the swarms are not large enough, put several together.

Mr. Henthorne—I always used full sheets of foundation in the East, and so did all the other bee-keepers. We thought there was no other way to do. I worked for Mr. Gill last summer, and made 400 increase, and could not believe my own eyes at the results.

Mr. Jouno—If the hive is turned end for end after small pieces of comb are built in the ends of the frames, will the bees fill it out with worker-comb?

Mr. Spencer—My experience is, a small swarm is just as apt to start in one corner as another. There is no difference.

Mr. Aikin—Mr. Doolittle has often explained in the bee-papers how it is simply a matter of conditions. It depends upon the age of the queen and the condition of the colony. Mr. Gill is correct. You can hive a swarm on starters and have nice worker-comb. If you remove a comb from a colony in the spring, the bees will build drone-comb in its place; but those same bees, if they are made to start entirely anew, and build all their combs, will build nearly every bit worker-comb. It is simply a matter of the right conditions. For every comb built from foundation I have had 100 built from starters. I have never succeeded in getting full, nice combs from foundation in hot weather. But if you follow Doolittle's directions you will get nice worker-comb. If the queen is old, perhaps after five worker-combs are built, the sixth will be drone-comb; but if the queen is young, it will probably be worker.

H. Rauchfuss—If I were running for extracted honey I would use full sheets of foundation, wired; but in producing comb honey I prefer starters. For extracting, foundation makes a stiff comb that will not break in the extractor. I would not use self-spacing frames for extracting, but eight ordinary frames in a 10-frame chamber. One can not uncap conveniently a comb that has a wide top-bar, and the wide top-bar leaves a space between the wire-screen of the extractor and the comb that breaks the comb when it is whirled around. Therefore, for extracting the narrow top-bar is better.

WRAPPING HIVES WITH TAR PAPER IN WINTER.

"Would you advise to wrap in winter your hives with tar paper, when the moisture creeps in through the different brood-chambers? I use two brood-chambers—the Heddon hive."

Mr. Jouno—I wrapped some hives in tar paper and banked the paper with earth around the bottom, and found the combs wet and moldy when the paper was taken off. But if the hives were set above the ground, so there would be a free current of air under the hives, it might make a difference.

Mr. Spencer—I object to it theoretically. In this climate it is hardly a week when the sun does not shine, and the paper would keep the sun from warming the hives.

H. Rauchfuss—That does not apply to tar paper, for it gets so hot in the sun that you can hardly keep your hand on it.

WAX-RENDERING EXPERIENCES.

Pres. Harris—Perhaps Mr. Rauchfuss will tell us how hot it made his honey-house.

H. Rauchfuss—That was not tar paper, but building paper. I had 15 pounds of wax melting on the stove in the honey-house, over water. The fire got low, and I put some more coal on and went in to dinner; some one called out that the honey-house was on fire. When I got there the flames had already traveled along the ceiling and reached the opposite side of the room. Thinking that room was lost, I rushed around on the outside to another entrance, to save something else. Just then my assistant, Mr. Steele, entered the room with a bucket of water, closed the door behind him, and dashed the water on the hot stove. The flames went out all over the room like a flash, choked by the steam. One should never attempt to melt wax without a double can.

Mr. Porter—I always boil wax out-of-doors. I have the tank in a brick furnace, so that it has a space around for the heat to envelop it. It is much more economical than a stove.

Mr. Gill—It is just as likely that one would set fire to his house, if he melted wax in the house. Years ago I had just such an experience in my shop, which had 1200 supers in it at the time. I put the fire out in the same way. Hereafter I will melt wax out-of-doors.

(Continued next week.)

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

A Wisconsin Woman's Bee-Experience.

Dear Miss Wilson:—I have wanted to write to you for the past six months, but "so much to do" is my excuse. I almost feel acquainted with you and Dr. Miller, after reading your writings for the past four years. Four years ago this winter I took the bee-fever, and was not satisfied until I possessed "A B C of Bee-Culture," and subscribed for three journals upon the subject. I intend to have some of the other books, also.

I began the next spring with one colony, and the way the poor bees were overhauled every day was enough to discourage them, but they cast a fine swarm, and put up over 50 pounds of comb honey. I bought more bees the next year, and have increased until now I have 84 colonies, which I put into winter quarters the last of November.

The last two seasons I had my bees 5 miles from town; a lady friend was in company with me one summer, but not being very strong she gave it up in the fall. Last summer I ran them alone most of the time. During the honey-flow I stayed out there 6 weeks, my husband spending Sundays with me, and my son would generally come out in the middle of the week to lend a helping hand for a day, and bring provisions.

During the spring I would ride out there once a week, also after the honey-flow. In the fall I went out quite often to feed for winter, as they gathered very little after July.

During my stay of 6 weeks out there I missed my friend of the year before, but had a young girl stay with me at night. I was happy with my bees during the day.

I got 3600 pounds of extracted honey from 41 colonies, and 150 pounds of comb honey from 3 others. My missionary colony put up 44 pounds. I think they might have done better. I enjoy the work, and feel so well when out-of-doors. Some days I have to work hard, but I am rested by morning.

I hope to attend some of the conventions, and meet the good people whose writings I read with so much interest.

Richland Co., Wis., Jan. 9. Mrs. W. J. Hillman.

I wonder if you realize that you were having all the benefits of a summer outing without the usual expense, your outing being a source of profit instead.

I was very much interested indeed in the report of your missionary colony.

I hope to have the pleasure of meeting you at some of the conventions soon. The best part of the convention, to me, is meeting so many nice people.

Bees Caring for Empty Combs.

Mrs. Griffith reports a bad year, May being the only good month, and that is not usually a great month for surplus so far north. Yet, in that month, each colony filled with honey an extra story of brood-combs. After that the season was so poor that not only was there no gain, but the bees had to use up part of May's storing for their own subsistence, leaving, however, some combs of sealed honey for next spring's emergencies—not a bad thing to have.

She had a somewhat unusual experience in putting empty combs under colonies to be taken care of, which she relates as follows:

> As I had more combs than my box would hold, I put a story of them under each hive; that was the last day of April. I had 6 left; as I had only 1 swarm that I know of, and that was the day before Decoration Day, I settled it, and thought all I would have to do would be to go and take the one I had put under, and when I took the super off the top and set it to one side, then went to lift off the top-body, it was all I could lift; the bees had filled between the two bodies with wax and honey, and I had to pry them loose. And what a time I had! Both bodies full of honey and brood, and what a mess of bees! Then what to do was the next question. I got another hive and put part of the comb and brood in it, and put the queen in it, and they were all right.
>
> They had filled the 16 frames full, and had the super half full. In the month of May, 5 of them had filled both of the bodies. One that had no honey when I cleaned them up filled only its own hive-body, as it was not so strong with bees.
>
> The bees did not have a flight last month; and it is so cold I am afraid it will not be good for them to be confined so long without a flight.
>
> I got only $12.56 cents worth of honey, but if I had what they stored in the extra body in hives, it would have made quite a difference; but the way the season turned out I would have had to feed them. Sarah J. Griffith.
>
> Cumberland Co., N. J., Jan. 5.

One would not usually expect bees to store so much in the month of May in New Jersey, but it seems that, at least in Mrs. Griffith's case, the combs needed some watching—not against worms, but against honey. An extractor might have done good service. There ought, however, to have been no trouble with combs and honey between the two stories. The probability is that there was more than one-fourth inch space between the top-bars of the lower story and the bottom-bars of the upper story.

Mrs. Griffith is having serious trouble with her eyes. She writes that she cannot see the least ray of light with one eye, and that the other one is not good. She expects to have them treated soon. I am sure she has the sympathy of all the sisters in her affliction, and that they all unite with me in the desire that the treatment may prove beneficial.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo. Ohio.

BEE-KEEPERS CROWDING EACH OTHER.

There are some rights and wrongs which the laws do not cover; in fact, it looks as if there were some that the laws could not be made to cover. What then? Shall we look on with indifference while one brother wrongs another brother? No, indeed! Public sentiment is a powerful thing; and we can to a great extent make or leave unmade the public sentiment. In an atmosphere of pessimistic, "You can't do anything about it," the well-meaning young apiarist may develop into a scoundrel. Let us, in our journals and in our conventions, keep the subject in reasonable prominence, and cultivate the doctrine of doing right in regard to every other brother's bee-territory. Furthermore, let us *require it* of every man that he respect such rights else be considered, inside the fraternity, as an Ishmaelite and a scamp.

A carefully worded and forcible declaration of these rights, and our purpose to respect them in others, and claim them for ourselves—the same to be signed, and the list of signers published—might be one effective way to do something, in place of doing nothing from year to year. Our previous weakness seems to have been that we delight to tie the thing up into needless knots, and then drop it till the next time. Page 805.

QUEEN-EXCLUDERS AND EXTRACTED HONEY.

Yes, Mr. Dadant, it's possible to run for extracted honey and manipulate in such way as to have the honey uncontaminated and decent, and yet do without excluders. But so many will not succeed in the first part of that (may be not try very hard), that I regret to see such a course recommended. It should not be considered as the regular way of doing—excepting, of course, when nearly all the honey is to be extracted late in the season. Wait late enough and there will be no unsealed brood except near the heart of the nest, wherever that is. Besides, one may not *like* to use half-size combs to extract from. And putting empty combs above a nearly full set may not seem to some as the best way. Page 807.

FLAVOR AND QUALITY OF EUCALYPTUS HONEY.

E. V. Pagan does well to remind us that where eucalyptus honey tries to sell in a foreign market there is lots of desperate kicking about the quality of it. Sad, if we should boom a honey for years only to find no one could eat it! How shall we harmonize or compromize these three discordant items? (1.) The Australians say eucalyptus honey is good. (2.) The British say they don't like the taste of it—will have none of it—except in bottles as a medicine, and not as a dessert. (3.) Our Editor has eaten excellent honey alleged to be eucalyptus from California. Well, a foreign market is liable to get its back up and be hostile without much reason except the selfish one. American pork in Germany, and American beef in England, quickly found that out. If prime basswood honey were exported to a country having none, and traders combined to raise a hue and cry against the taste of it, they would probably succeed in driving it out.

If we will allow it to be, our sense of taste is easily moved, and easily placated in its first protests. Most of the multitude of highly-praised tropical fruits don't taste good till one learns to like them. Australians have learned to like eucalyptus honey—while certain other folks viciously won't try to learn. As for the California sample, perchance it was more or less mixed with something better. (Did we not, years agone, have samples of orange honey similarly too good?) Certainly, different species are liable to vary a good deal in flavor; and different samples of the same species will vary to a less degree. The prime probability is, however, that all will have a family likeness of flavor, just as fall flowers of the great order Compositæ do. More witnesses are desirable, and perhaps more careful discrimination. Page 808.

QUEENS LAYING IN QUEEN CELLS—BEES MOVING EGGS.

Thomas Chantry, page 811, is a desirable witness on another subject still needing testimony. Has often seen queens lay in cell-cups—and has owned three queens that were excellent at the business of laying in cells put in on a stick.

Yes, and up bobs the question again whether bees ever move eggs from one cell to another. Very hard job for bee (or anybody else) to get an egg loose without breaking it, and ditto to get it fast again as it should be in another cell. Last time the matter was threshed over I believe the claim was that bees wait till the egg hatches out and then move the larva—a very much easier job.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Full Sheets of Foundation in Sections.

1. Would you advise using full sheets of foundation in sections, and have it fastened at the top and bottom?

2. Do you think it would stretch sufficiently to make it sag?

ILLINOIS.

ANSWERS.—1. No.

2. Yes. But you can succeed by putting in a bottom starter ⅝ deep with ¼ inch space between it and the top starter.

◆

Uniting Colonies—Cockleberry—Dead Brood.

1. Can I unite 2 or more colonies successfully by using a board containing 2 or more Porter bee-escapes placed between the hives whose colonies are to be united (after removing bottom-board and cover of said hives), providing I remove one of the queens? Would 5 or 6 p. m. be the best time to test the same?

2. Is the cockle. or cockleberry, bush recognized as a honey-plant? Late in October, 1903, one of my colonies, which was very strong, began to hang out on the sides and front of the hive. At first I thought they were fixing to swarm, but I could find no queen-cells, but the brood-frames were filled with honey. I then decided they wanted more room, but thought it was too late to put on a shallow super, but I put it on as an experiment, with full sheets of foundation, and to my surprise they filled it with honey in about 10 days. I then became anxious to know where the honey came from, when I found thousands of bees hard at work on the young cockleberry bushes. The honey is light in color and of very nice flavor.

3. My queens have been laying all winter, and I notice the bees carrying out dead brood to a small extent in the morning, their bodies seeming to have been crushed or gnawed. Can their death be caused by occasional cold snaps? The thermometer has never been lower than 21 degrees above zero, and only for about 2 hours at a time, the average cold being about 35 or 40 degrees above, and I always contract the hive-entrances when I expect a freeze.

LOUISIANA.

ANSWERS.—1. It would probably prove successful in most cases; and in cases where trouble was likely to arise there would be some advantage in operating in the evening, as at that time robber-bees would not be so likely to stir up strife.

2. I know nothing about the plant, but you have given pretty good testimony in favor of its being a good honey-plant.

3. Doubtful about the trouble being caused by cold. May it not be the work of the wax-worm?

◆

Fastening Full Sheets in Sections—Candied Comb Honey.

1. In putting in full foundation in sections and frames, should it come clear out to the edge, or should there be a space?

2. What do you do with comb when it is full of candied honey?

SOUTH DAKOTA.

ANSWERS.—1. It is impracticable to put it in without a small space, say 1-16 inch at each side.

2. Melt it carefully, and take off the cake of wax when cold.

◆

Queen-Rearing—Curing Foul Brood—Spring Feeding, Etc.

1. Which is the best method of queen-rearing, Alley, Doolittle, or Swarthmore?

2. Will George E. Hinckley's method of spraying the bottom-board, cure foul and black brood? This was described on page 825 (1903).

3. Can nuclei be formed by dequeening the colonies you want to divide, dividing them and inserting a sealed queen-cell in each nucleus? If so, how long should the colony be queenlees before attempting to divide?

4. Do you recommend spring feeding, by the Boardman method, described on page 147 of A B C of Bee-Culture?

5. How do you introduce queens with water?

6. How much Light Brood foundation will it take for 8 Langstroth frames?

7. Will eucalyptus grow here in southwest Texas.

TEXAS.

ANSWERS.—1. Alley's is best for Alley, Doolittle's for Doolittle, and so on. I prefer something a little different from either, as I have described in "Forty Years Among the Bees."

2. The statement of a foul-brood inspector, that he has succeeded with such treatment, gives some ground for hope that it may be successful.

3. Yes, divide two or three days after the removal of queen, giving cells at the same time.

4. Mr. Boardman is excellent authority, but it may not succeed with all as it does with him.

5. Simply hold the queen under water until she nearly or entirely ceases to struggle, and then put her on a top-bar in the queenless colony.

6. About 14 ounces.

7. I don't know; it's worth trying.

◆

"Thin" Foundation for Bottom Starters.

What grade of super foundation do you use for bottom starters in sections? Will the extra thin do?

CALIFORNIA.

ANSWER.—I use thin super foundation for both upper and lower starters. I'm afraid extra thin might topple over. Even if it did not, I prefer thin to the extra thin. The latter is too likely to be gnawed by the bees at any time when honey is not coming in; and at least in my locality there may occur even in the best seasons one or more days when bees gather nothing.

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FROM MANY FIELDS

A Cold Winter for Bees.

I do not believe 25 percent of the bees will winter and spring within 50 miles of here. A few years ago they filled up with honey-dew, and I lost 180 out of 185 colonies. That year we put them in the cellar. This year we

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Suffered for Years—Disease Pronounced by Doctors "Cancer of the Stomach."

BROWNSVILLE, MINN.

I wish to notify you and my ailing mankind that I was suffering for many years, especially during winter, when I could not leave the room for months and could not do my work; neither could I do my work in summer, for I felt pain if I exerted myself the least bit. The pain was mostly in my stomach, but the heart was also affected. I consulted several doctors; one told me I had Consumption; the other that I had Liver trouble; and the third that I had Heart disease, but none of them helped me. I also tried different patent medicines and electric belts, but with the same result—temporary relief and then it was the same again. Every fall I thought that I would not live to see spring. It finally became so bad last winter that I once more consulted a noted doctor, who pumped my stomach and examined it carefully, and then declared that I had Cancer of the Stomach, and that he could not help me. He also said that I could live only a few months longer. I then read about Vitæ-Ore in the German paper, which I have taken for many years, and just like one drowning, grasps at a straw, so I grasped for the medicine. I hardly had any confidence in it, but thought I will try it in God's name, and if it does not help it surely cannot harm, and look here: After using V.-O. for two weeks I felt an improvement, and after I had used the entire package I could do some work. Then I sent for another package and after using the same I could help along with any kind of work. I even helped along during harvest time and in making hay, and this winter I feel better than a long time before, and then, too, I am 61 years old now. If there is a medicine that can give one new life and new energies it certainly is Vitæ-Ore. I am indebted for my life to God's assistance and to this medicine. JOHN HEMBD.

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have the same number, 185, and have left them on the summer stands. The year I had them in the cellar the weather was very warm and open; this year is the coldest I ever knew. At the next town south, Salem, N. Y., it has been 47 degrees; at Fairhaven, Vt., I hear that the mercury went as low as 48 degrees below; here about 34 to 36 degrees below, and I expect over 100 colonies are dead now. I will report later. C. M. LINCOLN.

Bennington Co., Vt., Jan. 18.

Bees Wintering Well.

I have 80 colonies of bees which are wintering out-of-doors, and all are doing well. We have had a regular winter for about 7 weeks. We are having sleighing at present.

Madison Co., Ind., Jan. 18. ROY COX.

Succeeding With Bees.

When I reported last I had only 16 colonies of bees, and now I have about 70. I obtained from my best colony last year $21.50 worth of honey, and from the poorest about $3.00 worth, the average being about $8.00 per colony. I produce bulk comb and extracted honey which brings here 12½ cents per pound.

I have recently formed a partnership with Mr. J. R. Sprinkle, who is "an enthusiastic admirer of the elegant habits of bees," and who realizes that practical knowledge is the secret of successful bee-keeping. We are, therefore, reading the best books and journals pertaining to apiculture. I enjoy reading the American Bee Journal more than any of the other papers I have read on bee-keeping.

CHAS. L. SAMS.

Madison Co., N. C., Jan. 13.

Wintering All Right So Far.

The bees are wintering all right so far. I don't think I have lost any yet. I am wintering 142 colonies. W. S. FEEBACK.

Nicholas Co., Ky., Jan. 16.

Sweet Clover for Honey and Forage

I wonder how long those who find sweet clover honey to be of poor quality leave it on the hive to ripen. Now my bees have access to between 8 and 10 acres of sweet clover, and I find the honey very good. A bee-keeping neighbor about 3 miles from here, who has 100 colonies, which also have free access to this plant, produces excellent honey—good, heavy, clear, rich honey—but we are never in a hurry to extract our honey. We leave it on the hive until the season is well over; in fact, it remains on until all flowers are destroyed by frost. I confess that I cannot let any piece of ground lie around waste without scattering some sweet clover seed on it. I sometimes feel tempted to scatter it along the roadsides, and I don't think I would be doing much harm, then, either.

Talk about cattle not eating sweet clover! They will do it freely without any forcing, when they get a taste for it. I have seen cattle turn up their noses at alfalfa before now, until they got used to it, and that is considered to be good enough for anything.

W. D. HARRIS.

Ontario, Canada, Jan. 18.

Report for 1903—Swarming.

I got my first bees 13 years ago, when in my teens, and have been a faithful student of the little insect since.

The season of 1903 was probably the best ever known for honey in this locality. On my return home from the west, on May 15, I had 31 colonies, 3 of which were queenless and soon died, leaving 28 colonies, most of which were strong. They increased to 47, and stored 6900 pounds of comb honey. I took off the first honey June 15; the last, Sept. 23. The bees worked all this time, with the exception of about 10 days the first of August.

The first part of the season several colonies became queenless. I probably lost some queens in manipulating, as, for instance, I had been using an empty hive, with a tele-

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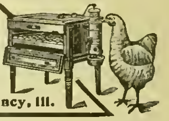

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scope cover on, for setting the combs in, which I would remove from a hive when the robbers were bad. One evening, for some reason, I raised the cover from such a hive, and there in the top of it was a queen and about a dozen bees. Where she belonged was a puzzle not easily solved. And the queens not being clipped, I lost several at swarming-time; they would go out with the swarm, drop down somewhere, the swarm would return, and the queen would be lost. One such swarm, after returning, went to work again lively. In about a week 2 swarms united. I took one queen and gave it to the queenless colony, and destroyed every queen-cell. They accepted the queen as though she belonged there. But the next day they swarmed, and a day or so later they absconded. I think if I would not have had so many mishaps with queens I would have reached the 4-ton mark.

The best colony, No. 33 (blacks), swarmed June 6. The swarm was hived in No. 40, and placed on the old stand, while No. 33 was moved immediately to a new stand; no queen-cells were removed, and they cast no after-swarms. No. 40 produced 302 pounds of honey, and No. 33 produced 130 pounds—a total of 432 pounds. A number of other colonies were not far behind. I did not try to prevent prime swarms, but all after-swarms. In a season such as the one just past, I believe one will secure more honey by letting the bees swarm, as they seem to work with more energy. Only one colony made no attempt to swarm and it stored 242 pounds—a little less than the average.

At first I would take and shake all the bees off the combs with the new swarm, and give the brood to the weak colonies until they were all built up. Others I placed on the stands of queenless colonies. If an after-swarm issued I would place it on the stand of the parent colony, putting the latter on top of the swarm. In a week or ten days I would have 2 fertilized queens, when I would unite them and have the whole force together again. I believe as Dr. Miller does, in strong colonies all the time.

One thing I observed and put into practice; When a swarm issues there will be as much brood, or more, than the remaining bees can care for, let alone the eggs. After swarming I would remove 2 or 3 combs containing eggs and the youngest brood and give it to strong colonies for about a week, when I would return it. This would make the old colony that much stronger, because if left in that hive it would have perished for want of warmth and nourishment. This is quite a factor in the early part of the season, but later on it would probably not pay to bother. E. J. Babb.

Stephenson Co., Ill., Jan. 4.

Good Honey Crop.

We had a good crop of honey last season—about 40,000 pounds—a little more than half extracted. I had one young swarm, hived June 8, that filled nearly ten 24-pound supers in a yard that had about 240 colonies. Bees are all right. N. Staininger.

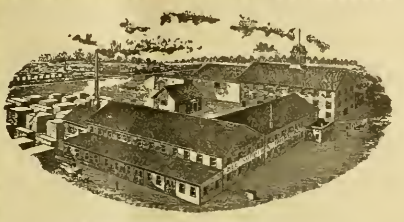
Cedar Co., Iowa, Jan. 18.

Do Queens Lay in Queen-Cells?—Bees Moving Eggs.

On page 811 (1903), Thos. Chantry holds up his hands in answer to my question, on page 766, asking if anyone ever saw a queen lay in a queen-cell. I have asked this question at several conventions, and no one was willing to answer in the affirmative, although some thought that queens did. The fact that I and a thousand others have not seen it, is no proof that it does not occur, while one witness, who has seen it, is proof that it may. For myself, I fear that Mr. Chantry is mistaken, as it completely refutes the Dzierzon theory of the size of the cell controlling the sex of the egg, and that is an accepted fact by our best bee-keepers.

I will accept Mr. Chantry's invitation to visit his apiary whenever he is ready, provided he shall pay my expenses if he fails to show a queen in the act of laying in queen-cells. If he succeeds, I will pay my own expenses, and hold up my hands, and give a big whoop, also.

In regard to workers moving eggs from one cell to another, he is correct in thinking I



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never saw them do it. But we can know a thing is done without seeing the act. I have placed a comb containing eggs in a hive containing a queenless colony, and the eggs were removed to another comb and they hatched worker-bees.

I once transferred a queenless colony and gave them brood, and they built 2 queen-cells on the wood splint that held a dry comb, and they hatched 2 fine queens from those ceils before any other cells hatched. In either case, if the eggs were laid by laying workers, they ought to have produced drones, and it is certain that the eggs were removed by the bees and placed in the other combs, or they were laid by laying workers, as there was no queen in either hive.

The case now goes to the jury of bee-keepers, without further argument from me.

Santa Barbara Co., Calif. **Delos Wood.**

Dry Winter—Bees All Right.

We are having a very open, mild and dry winter, which is liable to dry the white clover out if long continued, although I think it is all right yet.

The bees are wintering well, and with the present weather continuing they will doubtless come through in good shape.

E. S. Miles.

Crawford Co., Iowa, Jan. 18.

Destroying Ants—No Rain.

Put a lump (about the size of a quarter) of cyanide of potassium in the nest, wet it a little, place a piece of paper on top and throw a double handful of dirt on the paper to hold it in place. In three days remove the cyanide and put it in a new nest.

This drug is a deadly poison, but is all right to use if one exercises a little care.

No rain here yet; not a very good prospect for a honey crop. There has been only one day this winter that the bees did not fly. We have had ice frequently this winter, at night.

Kern Co., Calif., Jan. 8. **R. C. Corry.**

Severe Winter for Bees.

We are having a very severe winter here. The thermometer registered 30 degrees below zero on Jan. 5. We have over two feet of snow now, and it is snowing to-day at the rate of 1½ inches per hour. I don't know how my bees will come out; they have not had a flight since the middle of November. I have not bothered them, as they are pretty well snowed under. I predict a big loss in this State this winter, unless we get a warm spell soon. **G. W. Bell.**

Clearfield Co., Pa., Jan. 13.

Making Hive-Covers, Frames, Etc.

I see some questions asked in regard to the best hive-covers. I have tried almost everything, and the very best cover I have found yet I made from 4-inch flooring and 5-inch matched rustic siding. I cut the pieces long enough so I can nail them to a piece 1x1½ on the under side at each end, and allow ½ inch play, so they will always go on and off easily. Then get dry mineral roofing paint and mix it quite thick with linseed oil, and give them 2 coats. I can make them at a cost of 9 cents apiece; they will keep their shape better than any patent cover on the market to-day, with or without paint.

I think poplar makes one of the best hive-bodies. For frames I use the best grade of soft pine lath, costing 45 cents per hundred here. I can make them average one frame to a lath, and they are just as good as factory made frames. Take one lath and saw off a piece long enough for 2 bottom-bars; the other piece will make an end-piece. Rip the piece for bottom-bars through the center, so it will make 4 bottom-bars; and one lath will make 2 top-bars and one end-piece, or 5 end-pieces. The top-bars I rip off 5-16 from one edge; I then cut that into pieces just long enough to go between the end-bars, and I nail it to the under side of the top-bar with fine wire nails made from No. 18 wire; that stiffens the top-bar, and makes a comb-guide to fasten the foundation to. I use the same fine wire nails driven through each end-bar about equal distance apart, and bend good hooks on them with a pair of round-nose pliers, like bicycle pliers; bend the hooks all one way to put the wire on, and it is no job at all to wire the frames. For a wire embedder, get a balance wheel from one of those small round clocks, as thick a wheel as you can get; the teeth are sharp like saw-teeth. Set the wheel in a vise to hold it solid, then with a small, three-cornered file cut a nick in the center of each tooth 1-32 inch deep. For a handle get a stick ⅝ square and 6 inches long, saw into the end to let the wheel in deep enough, and put a wire-nail through for the wheel to run on. That makes the best wire embedder there is made. If it gets off of the wire it won't cut the foundation.

W. A. Moore.

Delaware Co., Ohio, Jan. 6.

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A Discouraging Prophet.

Bees are wintering well, and white clover is in abundance, and up to date is covered with snow and in fine shape. However, for all this, I still hold fast to the idea that this part of the country will not yield nectar from clover next season anything like the past season. This idea is drawn from the fact that hard freezing weather has prevailed ever since winter set in, with only a light covering of snow on the ground. Let us watch for the outcome.

Frank Coverdale.

Jackson Co., Iowa, Jan. 18.

Managing Swarming.

My bees were very weak last spring, and I had to feed a good deal. I lost several colonies. I had 58 colonies when the honey-flow from white clover commenced, increased to 100, and extracted 8000 pounds of as fine white clover honey as you ever saw; it averaged me 8 cents per pound.

The last year I did not move the bees to the bottoms, as I have been doing for the past 7 years; I had so much at home. When they had the swarming fever so badly I would take a frame of brood and nice queen-cells almost ready to hatch, and the bees that were on it, and then go to another strong colony and take another frame of hatching brood, bees and all, and put them in a new hive with one frame of honey, and close them up bee-tight for 2 days and nights on a new stand, and let them alone, and they did well. I got about half of my increase in this way. Of course, I helped them when they needed it.

I was making a bee-cellar last fall, and it made me late about getting my bees into winter quarters. I put in 73 colonies Dec. 26, and left 28 outside, as I want to see which do the best. My bee-house is 12x16, and the cellar is the same, and 6 feet and 2 inches deep, walled with stone 4 feet under the ground and 2 feet above, banked up roof. I was in the cellar to-day, and everything was as quiet as the dead hour of night.

I use the Simplicity 10-frame hive, and run for extracted honey altogether. I had my honey all sold 2 months ago. I could have sold as much more if I had had it.

I used a 2-frame extractor, but I want a 4-frame one, reversible. I have 2 hands in the honey-house, and myself out-of-doors, and we extract 2 barrels of honey a day.

James Grover.

Brown Co., Ill., Jan. 4.

Fumigating a Whole Apiary.

A few days before Christmas I completed a thorough job of fumigating my entire apiary for what seemed to be black brood. The odor was that of foul brood—also the coffee color—but it would not stand the toothpick test—seemed more like black, muddy water, only a little thicker, but would hang to the pick, break, and fly back. I used my honey-tank, which is 3 feet high and about 6 feet in diameter. I took the bees out of enough hives to fill the tank, shaking and brushing them into boxes, and when the tank was filled with hives I placed a soup dish in the center on the bottom of the tank and in it put two spoonfuls of formaldehyde and one of water, using a big iron spoon with a capacity of ¼ gill. Then I covered the tank with 8-ounce duck, with oilcloth over the top, letting the cover hang down on the side all around, with rope tied around to keep it air-tight. I fumigated hives, combs, blankets, lids, entrance-blocks, bee-brush and chisel, for 24 hours. Then I used these hives after pouring into them a common tablespoonful of the best carbolic acid, and turning the hive so as to run the acid around the edges of the floor (as I nail all bottoms to my hives), and then saturated the middle of the floor with eucalyptus oil. Now the hives are ready to shake other bees in, using only the combs with honey all sealed over and empty combs, both having been fumigated, and tiering up second stories containing partially filled combs, and those with broody matter in the apiary with a rag of cotton on top of frames saturated with bisulphide of carbon, and covered tight with a 20-pound stone on top. This was no holiday leisure, to treat 100 two-story hives, many of them full of honey from bottom to top, and the eucalyptus oil seemed to make them rob more.

The bees are all clean and nice, and queens are laying at the time of this writing. I am persuaded that the starvation plan is all bosh. Also, that Prof. Cook's fire cure is out of date. If the bees do not stay cured you will hear from me again.

There is one question I wish to ask: Do you think it safe to use these nice, straight, new, wired combs with foul-broody matter to hive new swarms on next spring, after having treated them as I have described?

DR. W. A. JOHNSON.

Los Angeles Co., Calif., Jan. 12.

[Will Mr. France kindly send to us his answer to the question for publication?—EDITOR.]

CONVENTION NOTICES.

Michigan.—The Northern Michigan bee-keepers will hold their annual convention March 30 and 31, 1904, in the Moutague Hall, 127 Front St., Traverse City, Mich.

GEO. H. KIRKPATRICK, Pres.
Rapid City, Mich.

Utah.—The spring convention of the Utah Bee-Keepers' Association will be held April 5, at 10 a.m. and 4:30 p.m. Among other important questions to be considered will be the World's Fair, our State Fair, and the Portland Fair of 1905. We also desire to formulate some plan, if possible, to further increase the fraternal interest for the mutual benefit of our bee-keepers. We cordially invite all bee-keepers to be present. We also invite them without delay to send in their views on these and other topics. The convention will be held in the City and County building, in Salt Lake City.

Salt Lake City, Utah. E. S. LOVESY, Pres.

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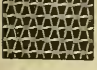

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HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, Jan. 8.—The new year opens with a quiet trade in honey, retailers having usually a supply from the stock laid in to make a good show at the holiday time. Prices are without essential change in No. 1 to fancy comb, which brings about 13c; very little doing in off grades at from 1@3c less. Extracted, white grades, bring from 6@7c, according to flavor and other qualities; ambers about 1c less; especially weak are those lacking in flavor and body. Beeswax steady at 28@30c.

R. A. BURNETT & CO.

CINCINNATI, Jan. 8.—The market on comb honey has weakened, as the supply has been larger than the demand. Fancy water-white, 14c; off grades, lower. Extracted, amber, in barrels, 5¼@5¾c; in 60-lb. cans, ½c more; alfalfa, water-white, 6@6½c; fancy white clover, 7@8c. Beeswax, good demand; 30c for nice.

C. H. W. WEBER.

PHILADELPHIA, Feb. 5.—There has been a decided decline in comb honey for the last 10 days. We quote fancy white, 14@15c; No. 1, 13@14c; amber, 10@11c. Extracted, fancy white, 7½c; amber, 6½c. Beeswax, 31c. We are producers of honey and do not handle on commission.

WM. A. SELSER.

CINCINNATI, Jan. 25.—The demand for honey shows little life at the present time. Have an ample supply, although we are looking for a revival of trade in the near future. Prices are declining, owing to the superfluous quantity in this country. We are selling amber extracted in barrels at 5¼@6c; white clover, 6½@8c, according to quality. Fancy comb honey selling slow at 14@15c. Beeswax, good demand, at 30c.

THE FRED W. MUTH CO.

ALBANY, N. Y., Feb. 1.—Honey demand very light. Prices of comb honey are largely now what the buyers will offer—from 10@15c. We look for better demand when weather is warmer. Extracted doing some better at 7c for white, 6½c for mixed, and 5½@6c for dark and buckwheat. Beeswax, 28@30c.

H. R. WRIGHT.

BOSTON, Dec. 21.—The demand for honey continues good, with an ample supply of comb, and a light supply of extracted. We quote our market as follows: Fancy white comb, 16@17c; No. 1, 14@15c; and practically no No. 2 to offer. Extracted, 7@8c, as to quality.

BLAKE, SCOTT & LEE.

KANSAS CITY, Jan. 28.—There is very little change to note in our honey market since our last report. The supply is still large and the demand fair. We quote: Fancy white comb, 24-section cases, $2.60; No. 1, $2.50; No. 2, $2.40. Extracted, white, per pound, 7c; amber, 6@6½c, Beeswax, 25@30c. C. C. CLEMONS & CO.

NEW YORK, Dec. 4.—Comb honey is arriving in sufficient quantities to supply the demand, and, as to the quality, most of the white honey seems to be off color, more or less. We quote fancy white at 14c; No. 1 at 13c; amber, 11@12c; and buckwheat, 10c. Extracted, light amber, at 6c; white, 6½c; Southern, 55@60c per gallon; buckwheat, 5½c. Beeswax, 28@29c.

HILDRETH & SEGELKEN.

SAN FRANCISCO, Jan. 20.—White comb, 1-lb. frames, 12½@13c; amber, 9@11c. Extracted, white, 5½@6c; light amber, 4½@5c; amber, 4@4½c; dark amber, 3½@4c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

Values are showing steadiness, but the demand is slow. There are complaints of doctored or adulterated honey being foisted on the market and interfering with the sale of the pure article.

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W. T. Falconer Mfg. Co.,
JAMESTOWN, N. Y.

W. M. GERRISH, Epping, N.H., carries a full line of our goods at catalog prices. Order of him and save the freight.

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Manufactures and carries in stock every article a bee-keeper uses. BEES AND QUEENS IN SEASON.
Apiaries—Glen Cove, L.I. Catalog free.

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BEE-KEEPERS' SUPPLIES
AT LOWEST PRICES possible.
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Write us to-day and say what you want, and get our prices. New catalog of 84 pages; it is free.
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Money in Bees for you.
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We Guarantee Satisfaction. What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS. PATENT WEED-PROCESS SHEETING.

Why does it sell so well? Because it has always given better satisfaction than any other. Because in 26 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies
OF ALL KINDS.

Langstroth on the Honey-Bee—Revised
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

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OUR AGENCIES:

As is customary with all large concerns, we have Agencies or Jobbers in different parts of the United States, where our goods are carried in stock. If you are located near any of those named below it will save you time and freight charges to send your order to them. Where the distance is not so great from Watertown to the Agency, these Jobbers sell the goods at our regular catalog prices:

E. T. Abbott, St. Joseph, Mo.
J. K. Hill & Co., Uvalde, Texas.
Dadant & Son, Hamilton, Ill.
L. C. & A. G. Woodman, Grand Rapids, Mich.
Fred W. Muth & Co., Cincinnati, Ohio, 51 Walnut St.
C. M. Scott & Co., Indianapolis, Ind., 1004 E. Washington St.
Fred Foulger & Sons, Ogden, Utah.
Robert Halley, Montrose, Colo.
Fruit-Growers' Association, Grand Junction, Colo.
Colorado Honey-Producers' Ass'n, Denver, Colo., 1440 Market St.
Louis Hanssen's Sons, Davenport, Iowa.
Paul Bachert, Acton, Calif.
Lilly-Bogardus & Co., Seattle, Wash.
Colorado Honey-Producers' Ass'n, R. C. Aikin, Mgr., Loveland, Col.
Wisconsin Lumber Co., Faribault, Minn.
The Arkansas Valley Honey-Producers' Association (Incorporated), Rocky Ford, Colo.
Chas. A. Gallagher, Maquoketa, Iowa.
Norris & Anspach, Kenton, Ohio.

G. B. Lewis Co., Watertown, Wis.
—U. S. A.—

Bee-Keepers' Supplies
SEND FOR OUR NEW CATALOG, 68 PAGES

Converted Cane-Sugar Not Honey.
MORLEY PETTIT.

Increase and Honey.
J. E. JOHNSON.

AMERICAN BEE JOURNAL

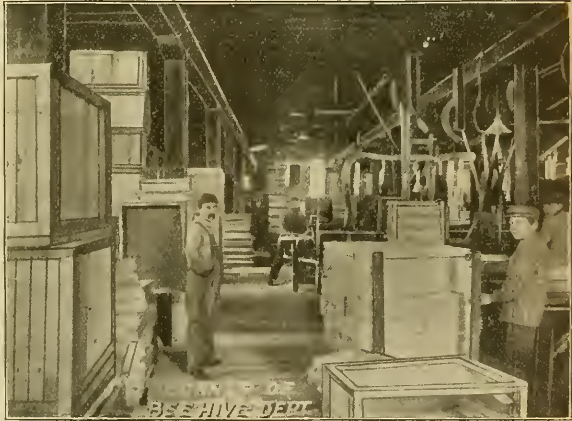
WEEKLY—$1.00 A YEAR.

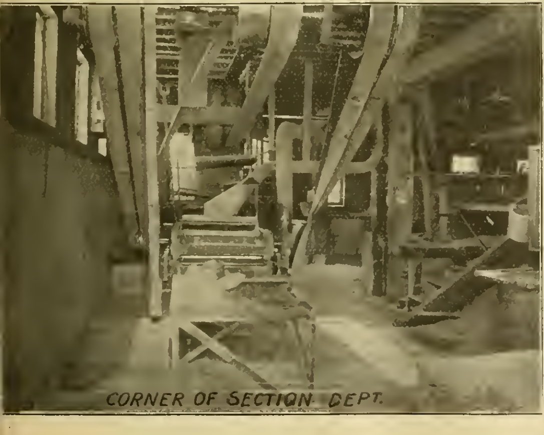
Published by GEORGE W. YORK & CO., 144 & 146 E. Erie Street.

44th Year. CHICAGO, ILL., FEB. 18, 1904. No. 7.

G. B. Lewis Co.—President and Interior Factory Views.

Geo. C. Lewis, President.


BEE HIVE DEPT.

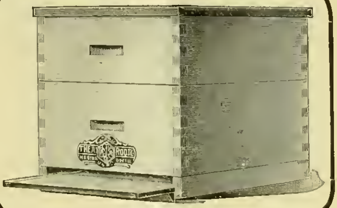

CORNER OF SECTION DEPT.

PRESIDENT'S ROOM

DANZENBAKER HIVE.

"FACTS ABOUT BEES"

A 64-page book written by Mr. F. Danzenbaker, giving a complete description of his famous hive and directions for using. Full of valuable information. Sent free on receipt of a two-cent stamp to pay the postage. Send for it.



The great popularity of the Danz. hive has brought the shallow frame into prominence. It must be remembered that no other contains the essential points of the Danz.

Danzenbaker Sample Hive Outfit for First Orders.

Five Danz. AD6 sample hives 4 put together ready for paint, including covers and bottoms; one brood-chamber fitted complete as a model, fittings for the other four in flat, with foundation for one inch starters........................ .... $7.00

Five Danz. 4M sample supers including sections and foundation starters. All 5 supers are nailed, and one has inside fixtures in place as a model, the fittings for the other four in flat........................ $4.75

The Danzenbaker hive is kept in stock at all our branch houses and principal agencies all over U. S. Our bee-supply catalog for 1904 gives complete prices, and will be mailed promptly on request.

O. L. HERSHISER.

The Best Bee-keepers use it.

Mr. Hershiser, manager of the New York State apiarian exhibits at the Columbian Exposition, 1893, where he won credit for himself and State by his magnificent display of comb honey, was selected as superintendent of the apiarian exhibits at the Pan-American Exposition. Being an up-to-date bee-keeper, and having a keen interest in the latest apicultural appliances, he installed a trial apiary of 10 colonies of working bees, mostly Italians, but with some hybrids, and one colony of black bees. The last named made the best record, storing 111 pounds in a Danzenbaker hive.

The Texas Honey Producers' Association has this day endorsed the 4x5 section super, and favor the Danz. style with H. S. separators. We feel sure we will have orders for you of from 1500 to 2000 Danz. supers. THE HYDE BEE CO.
Floresville, Tex., Dec. 30, 1903.

I have kept bees three years, and owe my success to the Danzenbaker Hive. I shall as soon as possible send you a report of my honey crop. But one thing I know now, and that is, that one Danz. colony gave me over 100 lbs. first-class honey, while a ten-frame Dovetailed hive gave 25 lbs., and the Danz. winters in fine shape without feeding. Both hives had an equal footing.
JASON B. HOLLOPETER.
Union Bridge, Md., Oct. 26, 1903.

PAN-AMERICAN PRIZE HONEY.

From a photo of the 60 prize Danz. sections produced in the State of New York.

First 20 sections, net weight 19 lbs., 11 oz.; stored in Danz. hives, awarded diploma and $25.00.

Second 20 sections, net weight 19 lbs., 9 oz.; stored in Dan. hives, in the trial apiary at the Pan-American Exposition, awarded $15.00.

Third 20 sections, net weight 18 lbs., 13 oz.; produced in Danzenbaker hives, awarded $10.00.

W. Z. HUTCHINSON.

The Choice of an Expert.

Mr. Hutchinson, Judge of Apiarian Exhibits at the Pan-American Exposition, editor of the *Bee-Keepers' Review*, and an enthusiastic and thoroughly posted bee-keeper, was, without doubt, the most capable man who could be selected judge of any thing pertaining to apiculture. His decisions are given greater value because he is fitted to speak from both scientific and practical standpoints.

The Danzenbaker Hive will, I think, take precedence over all others. I am delighted with it, as it is simple and easily manipulated. R. H. PEPWORTH.
Pietermaritzburg, Natal, Nov. 30, 1903.

The Best Comb-Honey Hive.

I am *very very* much pleased that you are willing that I should recommend the Danzenbaker Hive. I have had a great many inquiries about it, and have not felt at liberty to recommend it over our regular hives. At first I was prejudiced against it, but the sales have increased without recommendations, and wherever I have sold they have bought again and praised the hive with extravagant claims, and I am forced to the conclusion that it is the BEST COMB-HONEY HIVE on the market. J. B. MASON,
Manager North-eastern Branch,
The A. I. Root Co.

THE A. I. ROOT COMPANY,

BRANCHES: **Main Office and Works, Medina, Ohio, U. S. A.** BRANCHES:

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AMERICAN
ESTABLISHT IN 1861
THE OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL
Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

GEORGE W. YORK, Editor. CHICAGO, ILL., FEB. 18, 1904. Vol. XLIV—No. 7.

Editorial Comments

Honey and Beeswax Exports and Imports.

For the year ending June 30, 1902, there was exported from the United States, $106,112 worth of honey; for year ending June 30, 1903, $64,220. Beeswax exports for the same years, respectively, $36,541 and $21,337. The honey imports were for the year ending June 30, 1902, were 167,301 gallons, valued at $56,383; for year ending June 30, 1903, 287,696 gallons, valued at $115,400. The beeswax imports for the same years, respectively, were, 408,706 pounds valued at $115,937, and 488,576 pounds valued at $127,220.

Long-Ideal Hives—Doolittle's Experience.

Mr. Doolittle tells in Gleanings in Bee-Culture that some years ago he made two hives each four feet long, according to the long-ideal plan of having all in one story without tiering up. One was used for extracted honey, the other for comb. Neither worked to his satisfaction, the worst feature being that the bees in them died each winter, being wintered outdoors because too unwieldy to carry in cellar. Notwithstanding this, some good authorities in Europe have used and advocated them; and in this country no less a man than O. O. Poppleton has used them successfully for many years, both in Iowa and Florida.

Some Apiarian Nuts to Crack.

J. B. Kellen, in Praktischer Wegweiser, offers for solution ten problems of general interest, among which are the following:

> Why do bees prefer to dwell and work only in the dark?
> Why do queen-cells hang perpendicularly while worker and drone cells are horizontal? Mere lack of room is hardly a sufficient answer.
> What means the apparently playful vibratory shaking of the hind parts of a bee as it waltzes over the comb?
> What means the raking motion of the bees on the front of the hive as they steadily move back and forth?
> How long will eggs remain good without being hatched?
> How much, if any, influence do the drones exert as to the matter of swarming?

The solution of these problems may have little to do with the amount of honey to be obtained, but many who read them will be likely to say, perhaps with a sigh, "I'd just like to know, you know."

Formalin Gas for Foul Brood.

J. E. Johnson writes as follows in the American Bee-Keeper:

> Many think that germs are of animal life. The foul-brood germ is a plant, and it propagates by sporulating, which is a sexual act. Bacteria, like the pear-blight germ, is a plant, but is non-sexual. Now, don't forget this: Formalin gas will not of itself kill any germ at all, no matter how strong; but when the gas and the air are combined those two elements together produce formic acid, and the formic acid is what kills the germs and spores. So many say, "Oh, your box was not tight enough, therefore you failed," when the truth of the matter was, the box was too tight. Remember that the air is just as necessary as the gas. You don't want your box too tight. Let in lots of gas and lots of air. As long as you do that you will continue to produce formic acid. When the air stops coming in, you soon stop forming the acid. When you apply formalin gas to an air-tight chamber you only produce formic acid so long as that air lasts, or until that air ceases to supply the necessary elements. After that, no matter how strong your gas is you get no acid. Hence, it is not effective. Remember also that formic acid will hurt neither bees nor brood. Bee-sting poison is formic acid, the same identical stuff that is produced by formalin gas and air.

If Prof. Harrison's instructions are not misunderstood, he directs that a current shall pass through the box in which is the burning lamp, and though the box containing the combs to be disinfected, there being thus a current of air passing entirely through both boxes, and when by the smell it is ascertained that the gas is escaping from the upper hole of the upper box, thus showing that said box is filled with the gas, both apertures of the upper box are closed to retain the gas. However important it may be to have this box tightly closed, after it is filled with fumes, according to Mr. Johnson it will not do to have all tight before that time.

Formic acid plays an important part in the economy of the hive, but, according to the latest scientific investigations, the poison of the sting is not, as Mr. Johnson says, formic acid, but something that Dr. Langer has succeeded in obtaining entirely separate from that acid.

Hive-Covers and Their Requirements.

Of late there has been an unusual amount of discussion regarding hive-covers. Absolutely essential is it that a cover be rain-proof. In the opinion of some it is equally essential that a cover shall not twist nor warp. A demand next in importance, some claim, is that a cover shall be double, or have a dead-air space, thus making it a poor conductor of heat, so that it shall be warm in winter and cool in summer. The plain cover made of a single board has probably seen its day. Aside from its warping and twisting, Editor Root says that big pine trees are becoming so scarce that single-board covers are too expensive. Dr. Miller claims that double covers—the grain of the two parts running in opposite directions—covered with zinc, will neither twist nor warp; Editor Root thinks they will. They are expensive.

Who has tried the Arthur C. Miller cover, of cheap lumber, paste, and paint?

What is the most satisfactory cover at moderate cost, anyway?

Sweet Clover Not Yielding Honey.

Speaking of goldenrod and sweet clover, F. Greiner says in the American Bee-Keeper:

> "Undoubtedly they yield honey in some sections of New York, but, like catnip, the different mints, etc., they amount to nothing here."

That is not an unusual report of goldenrod, but has such a report been made before of sweet clover and catnip? Is it because they produce no nectar, or are the bees busy on something else?

Queen-Rearing—An English View.

John Hewitt, the British queen-breeder, says in the American Bee-Keeper that when royal jelly is put into cells and larvæ added the bees remove the jelly. Others have mentioned this; but Mr. Hewitt adds that when he tried putting in larvæ without the food, he "found they developed almost every one into queens, instead of just a few." He continues:

> I now pared drone-comb down, cut it into strips and put a larva in every alternate cell, and these were all reared into queens, although there was not a trace of royal food or the base of a queen-cell.
> I did not, however, feel satisfied as if I gave just-hatched larvæ,

they at once dried up in the cells, and very few would be developed. I then adopted the plan of giving the larvæ two days old, which were all soon on their way to become queens; when the cells were half-built I removed these larvæ and put in others just hatched from the egg, so that they tumbled, as it were, into a perfect bath of royal food; these queens invariably hatched out into splendid specimens.

Always on the "mend," I now used drone-larvæ two days old, for the following reasons: The bees start queen-cells on them just as readily as on worker-larvæ, and should one get missed or overlooked, it develops into a drone and not a small queen to play "old Harry" two days too soon; and when one has to depend upon help, it does not do to take risks.

A Milk and Honey Farm in Maine.

"A land flowing with milk and honey" has been a familiar expression for more than three millenniums, but a modern milk and honey farm is not very common. C. D. Winslow is reported, in the American Bee-Keeper, as the proprietor of such a farm in Maine. The young man has so far reached 20 cows and 40 colonies of bees, and daily visits the city with his milk-cart, on which appears writ large: "Pure Honey and Jersey Milk."

A Natural Remedy for Foul Brood.

Swarming is given by a writer in Praktischer Wegweiser as the best remedy for foul brood. Much the same as in the popular treatment, the swarm is thrown upon foundation or empty frames, and why should not much the same result follow? The trouble is that foul brood does not predispose to swarming.

Miscellaneous Items

The National Convention.—Announcement is made that the annual convention of the National Bee-Keepers' Association will be held in St. Louis, on or about Oct. 1, 1904.

* * *

Editor Morehouse, of Boulder Co., Colo., wrote us Feb. 1, as follows:

> We are having a very balmy winter, and I note that you in Chicago are having an unusually cold one. One morning the mercury was 4 below, but otherwise the lowest temperature of the season was 10 above, and since last September we have had almost continuous sunshine. H. C. MOREHOUSE.

* * *

Mr. E. France, the father of General Manager N. E. France, celebrated his 80th birthday Feb. 4. He might perhaps be called the "Father of Wisconsin Bee-Keeping." That he may be spared yet many years will be the hearty wish of all.

N. E. France wrote us Feb. 6, that on that day his bees had their first flight since November, and nearly all were alive.

* * *

Mr. C. H. Stordock, of Winnebago Co., Ill., calls attention to an error made in referring to his honey crop, on page 51, in the editorial on "Big Average Yields of Honey." His crop for 1903 was 15,500 pounds, 15,400 of which was extracted honey. It appeared as 15,500 pounds of comb honey *and* 15,400 of extracted. We are glad to make the correction. The same error is found in the Annual Report of the National.

* * *

A New Organization of bee-keepers was formed at Galesburg, Ill., Jan. 30, and the following officers were elected: President, J. E. Johnson; Vice-President, J. H. Moore; Secretary, E. D. Woods, of Galesburg; Directors—for 3 years, A. H. Bridge; for 2 years, F. E. Brooks; for 1 year, C. H. Putnam. The next meeting will be held in April, the exact time and place to be announced later. Every bee-keeper within reach of this new association should become a member.

* * *

A Good Reason for discontinuing one's subscription to any paper is all right, but here is a queer one that we received recently:

> GENTLEMEN:—I thought I told you to discontinue the American Bee Journal on account of that Weber formalin treatise you got off. D. C. BACON.

When we got the card with the above notice we showed it to a friend of ours. After reading it he said, "The foolkiller seems to be negligent." That expresses it exactly. He must be a veritable ignoramus who would stop taking a paper because it published a new idea or new experiment. We have often heard the expression, "He just saved his bacon." But here's a kind of Bacon that we fear is too far gone ever to be saved. He deserves the pity of sensible people.

PORTION OF ONE LUMBERYARD.

* * *

Apiarian Advertising Novelties.—From time to time we receive samples of the advertising novelties used by dealers in various lines. Apiarian supply dealers are beginning to use them. Calendars seem to be those most generally used. We have received nice ones from The A. I. Root Co., Jos. Nysewander, V. H. Fisher, and others. Also from Walter S. Pouder comes a good-sized thermometer. All of these have the card of the sender printed on them. And all are useful. Perhaps the thermometer has the more lasting qualities, as it need not be sent out annually. But both calendar and thermometer are very useful. All have our thanks for remembering us.

* * *

Reports from Different Localities.—Mr. I. T. Osburn, of Santa Clara Co., Calif., wrote us as follows, Feb. 2:

> "I don't see any letters about bees from this part of the country. We have 23 colonies, all doing nicely. I read the American Bee Journal, and find it very interesting. I. T. OSBURN.

That is all Mr. Osburn wrote, and, so far as we know, it is the first time he has reported. Now, we can't manufacture reports. If they are not sent in, we can't publish them. Suppose, Mr. Osburn, that you set the example for your locality, and send in a report once a year. Then there would be at least one reporting from your part of the country.

* * *

Mr. Geo. W. Brodbeck, of Los Angeles Co., Calif., the new secretary of the National Bee-Keepers' Association, has been very sick. In a letter dated Feb. 4, he writes as follows:

> DEAR FRIEND YORK:—I am sitting up a little to-day, so I am tempted to scribble these few lines to tell you that I have quite recovered from a severe attack of pneumonia. It was a hard fight, but good nursing, prayer, and a kind Providence, seemingly have given me a new lease of life. I have been confined to my bed for over a month, and I am very weak, but the doctor says I am doing finely.
>
> My trouble developed from having a fire at one of my apiaries. GEO. W. BRODBECK.

Mr. Brodbeck's host of friends will be pleased to learn of his recovery. He is not very strong physically, but with proper care, and in the glorious climate in which he lives, he will likely last as long as the most of us, if not longer. We hope he may be spared many, many years to carry on the good work he is doing.

The G. B. Lewis Co.—After the traveler bound for St. Paul leaves Milwaukee, he sinks back in his comfortable seat bidding farewell to all signs of activity until he shall reach his destination in the morning. As he leaves Watertown Station and crosses the Rock River, he sees on its bank a large building lighted up by thousands of electric lights, with smoke issuing in dense volumes from its chimneys. He hears a mighty rumble of machinery above the rush of the train, and in an instant he is past. This great building which the traveler has seen but for a moment, with a large warehouse, office building, and three immense lumber yards near by, comprise the plant of the G. B. Lewis Co., one of the two largest in the world, given over to the exclusive manufacture of bee-keepers' supplies, known far and wide to the honey-producing population of this country, Europe, and the entire world, and yet never heard of by many at their own door, who are still strangers to the busy bee.

FIRST FLOOR ELEVATOR SHAFT.

Five floors compose the main factory. A miniature railroad runs into the ground floor, transporting the lumber in its early stages from the yards to the planers. In this department the wood is partially prepared, being planed for hives, polished for sections, and by means of an electric elevator is carried to the floors above, where operations are completed later on.

On the next floor below is found the iron-working department where the boring is done, saws are kept in shape by help hired for this purpose alone, and where special machines are constructed.

On the third floor is found the bee-hive department, where hundreds of saws sing from early morning till late at night. Here the hive-parts are made.

On the next floor above, the long basswood strips are sawed into correct lengths, and girls seated at benches sort these into different grades. The sections are also manufactured, crated and marked here, and finally sent down a long chute to wagons below, where they are put into storage or loaded on trains. In this portion of the factory are also made the woven wood and wire boxes in which bee-supplies are packed. This method of packing has characterized the Lewis shipments for years.

The fifth and top floor is given up exclusively to the packing department, 20,000 square feet of floor being used for this purpose. On this floor is also found the library of the G. B. Lewis Co., where every book known to the bee-student is for sale. Here comb foundation by the ton is packed into neat boxes, ready for shipment, and every other device that the bee-keepers can possibly want is on hand in large quantities.

This large industry did not spring up in a night. It represents the efforts, the study, the labor, and the persistence of over a quarter of a century. Thirty years ago the late Mr. G. B. Lewis, then a young man, engaged with his brother, Robert E. Lewis, in the business of making sash, doors, and blinds. In those days bee-keeping was not a specialty. A farmer here and there kept bees, and made, after a homely fashion, his own hives and other appliances. Occasionally one would come to the shop of the Lewis Bros. and have a few hives made, and from this small acorn of crude carpentry grew the mighty oak of Perfection in the machine-made bee-supplies turned out by the Lewis Company to-day.

In 1878, Mr. Chas. E. Parks came into the business, Mr. Robert Lewis having retired eight years before. In 1890 the business was incorporated, and ever since has been known as the G. B. Lewis Company. Mr. Parks proved a most valuable acquisition to the firm, and remained actively interested until his death, in 1895. He was a man of great ambition, a mechanic of the highest type, and by his inventive genius greatly improved the methods of manufacture. He was also the originator of many new machines, and finally invented what is now the well-known Parks' patent woven wood and wire shipping and packing box. Owing to his successful efforts in this latter venture, he was sought by promoters throughout the United States, as well as England and France.

The plant is situated in the garden spot of Wisconsin. Surrounded by Nature in its most beautiful form it rests—peaceful without, though most active within—on the west shore of the river, and with its tall smoke-stack and piles upon piles of lumber, presents a most picturesque sight. Adjacent to the factory the beautiful Rock River dam rushes and rumbles in summer-time to the aid of the great engine, until its rumble, growing fainter and fainter, loses itself in the distant fields beyond where it mingles with the hum of the bees that profit by its toil. Conveniently located is this large industry, easily accessible to the lumber regions of northern Wisconsin and Minnesota. In the year 1903, 800 cars of basswood, elm, poplar and pine were shipped into Watertown and switched onto the G. B. Lewis Company's private tracks. To the average layman this seems enough wood to supply sufficiently the bee-keepers of a continent.

To arrive approximately at the business that is done by this Company in a fair season, the following facts covering the year just passed may be of interest: 50 car-load orders alone, and 10,000 smaller orders as well were entered and shipped; 10 tons of comb foundation, thousands of hives, and 15,000,000 sections were sold. The sections alone, if placed unfolded in a straight line, would more than reach from Chicago to San Francisco.

This concern now occupies in the business world a place of prominence envied by many, and enjoys a reputation justly earned. Its success is largely due to the modern and liberal methods employed by its officers, who exemplify the old adage, that "Liberality begets liberality." At the helm of this institution is found Mr. Geo. C. Lewis, its president, who has had the active management of the business for years. Mr. Lewis, whose portrait appears in this issue, is the son of the late G. B. Lewis. He is a young man of rare business sagacity, energetic, of high integrity, and thoroughly alive to the best interests of his company and its customers. Geo. C. Lewis is well known, and occupies a position of prominence among the leading manufacturers of bee-supplies.

MAIN OFFICE - MAILING CATALOGUES.

The Lewis Company gives employment to over 100 people, and now, while the flowers and buds have not yet arrived, and the bees are still sleeping, and the ground is covered with snow, all hands are working, toiling, sweating. Day and night must they labor, office and factory alike, and voices are even now heard calling, loudest of all the jobber, the wholesaler next, and even the murmur of the bee-keeper himself is heard in the distance, increasing as spring approaches till it drowns out the noise of his swarming bees.

Having been in this hive of industry, we can personally testify to its greatness and superior qualities in every way. G. B. Lewis are, and have been for years, among our regular advertisers. Their goods and honorable dealing testify to their popularity as well as reliability.

The Adulterators of Honey in California are likely to "hear something drop" very soon. The San Francisco Examiner, of recent date, contained the following in reference to this matter:

"The food inspectors of the Board of Health have been informed that much adulterated honey is being sold in this city. Acting on this information they have, under the direction of Dr. Hassler, chief food inspector, purchased a number of samples of honey from many different dealers. These have been turned over to the industrial chemist for analysis, with the result that the suspicions of adulteration have been confirmed.

"'In a few days,' said Dr. Hassler yesterday afternoon, 'we shall make arrests. The experiments have not yet been completed, but we know already as a fact that glucose is being used freely to adulterate honey.'"

Contributed Articles

Converted Cane-Sugar is Not Honey.

BY MORLEY PETTIT.

We know that chemists have succeeded in putting together the elements in their proper proportion which constitute living organisms, but failed to add the spark of life. It is facetiously related that hen's eggs were produced which hatched chickens, but *without feathers*. In either case, while the scientist would understand that his efforts had not been crowned with success, he would need to report his results with caution lest the public should receive a wrong impression therefrom.

4 TH FLOOR
PACKING & SHIPPING DEPT

On page 21, Prof. A. J. Cook has a scholarly article on the chemistry of honey, and its relation to the other sweets. While I indorse all the Professor has said on its food-value and its superiority over other sweets, I would guard against a misconception which might arise in the lay mind from some of his statements with reference to nectar, cane-sugar, and honey. For instance, "Digestion of cane-sugar converts it into honey, so honey is practically cane-sugar already digested." This gives a wrong impression. The conclusion most commonly arrived at would be that bee-keepers were able to produce honey by feeding their bees sugar syrup, and that they were in the habit of doing so.

Let us consider carefully this statement which he quotes from Dr. Kellogg. There are two statements, the second apparently meant to be the converse of the first. But the word *practically* is inserted.

Let us see farther down: "The nectar of the flower is not honey." True. "It is *virtually* [my italics] cane-sugar." He then explains *practically* and *virtually* by the incidental insertion of "*slightly* flavored with some organic extract from the flower." "The bee ......converts it into a mixture of dextrose and levulose. This is honey." No, not without the "organic extract," which, in most cases, more than "slightly" flavors it.

This constituent which distinguishes honey from all other substances, is described by another eminent chemist as "certain volatile oils and indefinable matter" which give the flavor and aroma of blossoms from which it is gathered. What an important part the flavor and aroma play in honey all dealers know. Some markets demand honey of a certain flavor, and will have none of a certain other variety generally considered its equal. Prominent and successful dealers have their standard blend of honey produced by mixing honey from different sources in fixed proportions, and if, for any reason, they are unable to supply this particular flavor, their sale of honey is seriously affected.

Now, if the statement that "honey is practically cane-sugar already digested" were given prominence in the public press, what would be the result? A revival of the "Wiley lie" with renewed vigor, and also a hard blow to the reputation of extracted honey, whose good name we are trying so hard to put beyond reproach.

I would say with Prof. Cook, "It seems to me that one of the blessed uses of our Christianity, is to teach and persuade people to let in the light." I would add, however, that it *is* better, sometimes, to be conservative even in matters of such import as stating "truth," and to be especially careful that we state a *whole* truth. Ontario, Canada.

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No. 2.—Getting Both Increase and Honey.

BY J. E. JOHNSON.

(Continued from page 102.)

I HAD only one swarm abscond; that was my fault. They lit in a tall tree, and in getting them down I dropped them, and although I hived them they were as mad as hornets, and I think that is why they left. On a warm day, if I hive a large swarm thus, I take a blanket or piece of carpet, wet it in a tub of cold water, wring out some of the water, and put over the hive for a day or two, letting it hang down on the south side. I also use a ventilated cover, and have practically no trouble from absconding. I have a young peach-orchard in and near the apiary, and in there the swarms would cluster and were easily hived. I always shake the bees down in front of the hive and let them run in.

Now, in regard to raising that extracting super and putting a super of sections between, I have tried that plan and want no more of it; that is, when there is brood in it; queen-excluder or no excluder, I get pollen in the sections, and sometimes brood besides. I wanted those extracting supers for brood-rearing. That was the means of my getting such roaring colonies before they swarmed. Profuse swarming from small colonies is disastrous to surplus honey from either swarms or old colony, no matter how you work them. I have not had good results by cutting the brood-chamber in two.

MAKING PACKAGES
FOR BEE SUPPLIES.

Now, as to natural or artificial increase, I have tried both for something like 20 years (I have moved and started anew in different localities several times). If, in a good season, I have only a few colonies, give me natural increase every time for honey the same year; but build the colonies up big and strong by feeding judiciously and giving large brood-chamber (I don't want anything but an 8-frame hive, using an extracting super above at the proper time); and when you have large swarms they are a decided success for surplus honey, if you work them rightly. If I wanted only moderate increase, I would give the bees from the old stand to the second swarm, and prevent any third swarms.

Nuclei are all right for increase, but you will have to wait until the next year for your surplus honey. My best yield per colony was 230 pounds, that was from a first swarm; 200 pounds of that was comb honey, and that colony has an extracting super on now pretty well filled with honey that I have not counted; and, by the way, that queen was reared last year from a 1-frame nucleus, the nucleus building their own cell, and the frame was well covered with bees. I had another queen reared this way, and she was good, but did not do as well as this one.

Now, I have a neighbor bee-keeper of considerable experience, about 3 miles away, who uses full sheets of foundation in brood-frames for swarms; his increase was a good deal less, and he got less than half the honey that I did per colony, spring count (his was all comb honey). Also, 3 other bee-keepers of considerable experience got only about 50 to 75 pounds per colony, spring count; but they lost several swarms.

BEE HIVE DEPT.

My honey is all sold but 11 cases of comb honey and about 150 pounds of extracted, one little store in our little village having sold, so far, 14 cases of my honey. Some of these cases held 32 sections, but most of them only 24. To private families I have sold as high as 5 cases, and one man has taken 7 cases, and 1 gallon of extracted, but some of this he sent to friends. To some families I sold as much as 4 gallons of extracted. The extracted honey I have sold only at my house. Several other stores have taken from 5 to 10 cases. I sent 10 cases of my best honey to a large city to see what it would bring. After transportation and breakage was deducted it brought me less than my No. 2 did at home. There is very little honey in the bee-keepers' hands near here now.

I am wintering the bees on the summer stands, protected by newspapers and stores-boxes, excepting 8 colonies which are in the cellar. I have no objection to any one following the old, orthodox way of manipulating bees. The supposed-to-be-proper way 50 years ago is not the way of to-day; neither will the supposed-to-be-proper way now be the way forever in the future. There is no orthodox way of manipulating bees that will prove to be the only good way in all localities, with all people in all seasons.

Now, in closing, let me drop one word of advice to the beginner: Don't play with the fire. Don't invest a lot of money in bees or fixtures expecting soon to make a fortune. Don't try any way or plan of manipulating bees on an extensive scale until you have tried it in a small way. Don't depend upon bees alone for your living; but if you find after several years' experience that you can handle bees successfully, then you will know if it will pay you to keep bees in your locality, and as to its resources for honey. You will then be better enabled to know how to get the most honey.

I wish to add just a few words in regard to combs or full sheets of foundation instead of strips for a large swarm. When you put such a swarm on combs or full sheets the queen will fill it clear full of brood, or the bees will fill it with honey. Which is the better? If full of honey, then they will never empty it for her late in the summer, and you will have a weak colony of old bees for winter. If the queen fills it full of brood, it will take the honey of that best honey-flow to feed that brood, and so on. Just like the man who had a team. He kept them well. Each year he planted corn enough to raise feed for his team. He worked all summer to attend to it, and when winter came he fed the corn. Then the next summer he did the same way. The team fared well, but as for himself he got nothing. You may have your bees on nice all-worker comb if you like, having worked hard against Nature to get it; then get some honey to rear bees, to get a little more honey to rear a little more bees, and so on. But, for my part, I want to rear a whole lot or bees just in time to use them for surplus, and then put them to work in supers not just to rear more bees. I aim to keep bees for the money there is in it, not for the mere fun of hiving swarms; and 250 pounds per colony, spring count, is not merely the result of a good season, but of being prepared for it and manipulating the bees according to the honey-resources I have. I consider that that part made me half of that honey as well as increase.

Now, don't understand me to say I want a large amount of drones, but I don't begrude feeding quite a few. I think some drones are a necessity for good work. Perhaps the workers feel better and work harder because they sing their song of cheer to them. Don't begrudge the bees a little cheerfulness. Their life is short and full of hard labor.

Knox Co., Ill., Dec. 17, 1903.

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Why Not Help a Little—both your neighbor bee-keepers and the old American Bee Journal—by sending to us the names and addresses of such as you may know do not now get this journal? We will be glad to send them sample copies, so that they may become acquainted with the paper, and subscribe for it, thus putting themselves in the line of success with bees. Perhaps you can get them to subscribe, send in their dollars, and secure for your trouble some of the premiums we are constantly offering as rewards for such effort.

PORTION OF FIRST FLOOR

Our Wood Binder (or Holder) is made to take all the copies of the American Bee Journal for a year. It is sent by mail for 20 cents. Full directions accompany. The Bee Journals can be inserted as soon as they are received, and thus preserved for future reference. Upon receipt of $1.00 for your Bee Journal subscription *a full year in advance*, we will mail you a Wood Binder free—if you will mention it.

Convention Proceedings

THE COLORADO CONVENTION.

Report of the Proceedings of the Colorado State Bee-Keepers' Convention, Held in Denver, Nov. 23, 24, and 25, 1903.

BY H. C. MOREHOUSE, SEC.

(Continued from page 104.)

HIVE-COVERS—LONGMONT HIVE.

Mr. Aikin—In that Longmont hive-cover, in which there are two boards on top, covered by muslin painted on, does not the muslin crack over where the boards join?

Mr. Gill—A few covers split the cloth there, but when the cover keeps on shrinking it does not tear the cloth. If the boards swell, it will. But they will not swell if there is a circulation of air underneath, and not too many quilts are used.

H. Rauchfuss—I had about 150 covers covered with canvas painted on both sides. The canvas is now all rotten. If I cover them again, I shall use Neponset building paper. I have covered a good many with paper. I use a piece of lath nailed next each side edge of the cover, on top. These laths are not quite so long as the cover, so they leave a little space at each corner for the water to run off. In this space, at each corner, I fasten down the paper with the nails and convex tin washers that are ordinarily used for building paper, so the paper is firmly fastened without depending upon the laths. The laths are also cut slanting at each end, so as to guide the water to run off at the extreme corners, so it will not drip on any part of the hive. I find paper is cheaper and better than cloth.

Mr. Gill—I use very thin muslin, costing 4 cents a yard.

Mr. Aikin—How much lumber is in an 8-frame Longmont hive?

Mr. Gill—16 feet with the frames. The halved corners keep in better repair than those of the dovetailed hive.

F. Rauchfuss—If the pieces of the dovetailed hive are not put together for two weeks or more after receiving them, they do not fit any more. With the halved corners there is no such trouble.

Mr. Gill—The corners of the rabbets are also much better in the hives with halved corners. With this hive I also use an inner cover. Most inner covers are made to fit the inside of the hive. This is the same size as the outside of the hive, hence leaves no possible chance for outside bees to get into the hive. I never use the inner covers in winter. With this kind of outside cover, that has a rim all around the edge, I use but one thickness of burlap. The bees winter better.

H. Rauchfuss—If you leave the burlap off entirely the bees will winter just as well. I have seen bees that wintered without a cover, besides having the spaces between the combs half filled with sand that blew in.

Mr. Gill—Do you think it best to winter with supers on top filled with chaff?

H. Rauchfuss—I used to do that, and I used to contract the entrance. Those were two mistakes. The bees did not winter so well. The combs became moldy and icy.

Mr. Gill—My wife picked a lot of colonies that had young queens, and fed them 26 pounds apiece of sugar syrup in the fall. That started so much breeding that they consumed a great deal of it. But they reared much brood late in the season, and she wintered all of them. Another lady had 65 colonies in a grove, with supers full of chaff over each one. In the spring there were 40 weak colonies left.

ADDRESS BY MRS. GRENFELL.

Mrs. Grenfell, State Superintendent of Education, was called on for a speech. She contrasted the present conditions with those of 30 years ago, when mining interests were exclusively predominant, while now there are gold mines in every line of work, and we need not fear if Aspen is a shadow of what it once was, or if Gilpin County or Cripple Creek become so, because we have opportunities in agriculture such as no other State has; suggested that we need all the sweetening possible in these days of strenuosity and scandal, and concluded by congratulating the bee-keepers on the progress of their work, and wishing them the greatest success imaginable, feeling grateful to them, and especially to their pioneers for their work, and hoping the meetings would continue in interest and value.

THE NATIONAL ASSOCIATION AND BEE-DISEASES.

Pres. Harris—I don't think the proper effort has been made by our Association in the way of getting the National Association to get appropriations to investigate the different diseases of bees. I hope the Committee on Resolutions will take this up. I hope that in connection with the National Association we may save ourselves many dollars in this way.

H. Rauchfuss—I move this be referred to the Committee on Resolutions, and copies of the resolution sent to the National. We need such aid, not only in investigating diseases, but also along other lines, and are justified in asking it. [Seconded and carried.]

FEEDING SYRUP FOR WINTERING BEES.

F. Rauchfuss—Last winter many colonies had to be fed, and sugar was resorted to. What has been the experience in feeding thick and thin syrup?

Mr. Gill—I found it necessary to do considerable feeding. It is claimed by many that the work of inverting the syrup ages the bees, as the age of bees depends upon the amount of work they do. I fed 8000 pounds of sugar, commencing Aug. 20. The earliest fed was thin, the later thicker, but it was never thickened enough to granulate. At first the proportion of sugar and water was made half and half, and later 90 pounds of sugar were used to 50 pounds of water. As an illustration, I fed 60 colonies—swarms that had been hived late, all with young queens—26 pounds of syrup apiece. They were fed late, until they had built out their combs. The 26 pounds of syrup apiece was worth say 75 cents. The colonies, after being fed, would have brought $6.00 apiece. Ninety percent of them would have died otherwise. It was not so much the feeding of sugar that put them in good condition as the fact that they reared large numbers of young bees, bees with vigor. It makes no difference if we do wear out one set of bees, if another set is reared. That yard was fed in the open air. Other yards were fed with pie-tin feeders, using excelsior as a float, under covers having a two-inch air-space. The bees always keep the syrup warm in such feeders. You would be surprised to find how late you can feed. Warm water was used in making the syrup.

H. Rauchfuss—I fed some by taking the fixtures out of a super, tilting the hive, and setting in the super, wrong side up, a piece of propolized canvas that had been used for a quilt, with the ends folded up. It would hold a good deal, sometimes a gallon. For floats I threw in leaves. Some of

OFFICE, MANAGER ORDER DEPT.

the colonies did not take it all down for a week, but they took it whenever it was warm.

Mr. Gill—I found 8 queenless colonies on Oct. 8; made the 8 into 4, and fed all they would take till Dec. 1, and every one wintered, while 60 percent of the apiary they came from died. That shows what a little stimulative feeding will do late in the fall. I would rather have a hatful of late-reared bees than a bushel of July and August bees for wintering.

INSPECTION OF BEES AND THE LAW.

Pres. Harris—Bee-Inspector Pease reports that the attorney of his county has taken the position that unless the bee-keeper calls on the inspector, the inspector shall not inspect. I recommend action.

Mr. Gill—Isn't it a fact that under the existing law the inspector has no right to visit? I don't believe, myself, the inspector has a right to work in such a way as to get a lot of names on his list. Our rights cease where others' begin.

Pres. Harris—This trouble will make a precedent, and other counties, too, will take the same action.

F. Rauchfuss—Bees are taxed in nearly every county, and require protection. As an illustration, a man near Denver kept bees for 10 years, and had foul boood all the time, but never would have an inspector near. If I have such a neighbor I have a right to call on an inspector to visit him.

Mr. Gill—If a bee-inspector finds foul brood, and leaves it, go for the inspector. He is amenable. But he should not use the summer salary-getting.

F. Rauchfuss—As one of the framers of the law, I will state that we never intended to put such a narrow construction on it.

Mr. Pease—I received a card from a man asking me to go and look at his bees. According to the interpretation of Mr. Rush, I have no authority to go.

(Continued next week.)

Fillmore Co., Minn., Convention.

The Fillmore County Bee-Keepers' Association held their second annual meeting at Preston, Minn., Jan. 14 and 15, 1904. There was a good attendance and a good interest manifested. It was decided to start a bee-keepers' supply agency at Preston the coming year, where members of the Association could get supplies at reduced rates, and where beeswax could be collected and sent away in bulk to be made into foundation. A grade of honey was established, and an effort will be made to hold the price of fancy and comb at not less than 12½ cents per pound for the local markets. Heretofore the price has been as low in some cases as 8 and 10 cents per pound.

A meeting of one short session will be called to be held during the next county fair, to ascertain the supply and dictate the prices on the honey crop.

Our members all became members of the National Association in a body, and it was hoped that other associations will do likewise. P. B. RAMER, *Sec.*

Fillmore Co., Minn.

Worcester Co., Mass., Convention.

At a meeting of the Worcester County Bee-Keepers' Association, held in Worcester, Mass., Jan. 9, 1904, there was much amusement in the reading of the article in the American Bee Journal about "He-Bee Molasses." How much that thought is illustrated in every-day life, when an ignorant man or woman tries to talk on some matter with which they are entirely unacquainted. When a person gets up in a bee-meeting and starts to talk it does not take long to "size him up," so to speak, and determine the amount he knows. But in the case of our convention, Dec. 12, we didn't have to wait for Mr. Arthur C. Miller, of Rhode Island, to speak to determine his caliber. His whole manner before an audience is to impress one with the fact that *here* is a man that can talk on a subject he knows something about; and so it was with Mr. Miller. If any of the readers of the Bee Journal are ever near when Mr. Miller is to speak, put yourselves to a good deal of trouble, if necessary, and go and hear him.

Worcester and the State are waking up. We now have a State association, small to be sure, but "from small beginnings" great things have grown. We hope to do something with a pure-food law, and also to help out those whose bees are suffering from foul brood. I am inclined to think Mr. Miller is under the impression that it is not foul brood but something else that is destroying bees in certain sections of our country.

Our society is progressive, and we are determined to make 1904 a banner year. We have speakers in view, outings and picnics in contemplation, and our aim is to usher in 1905 with 100 members. C. R. RUSSELL, *Sec.*

Worcester Co., Mass., Jan. 11.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Delightful Winter Weather.

We are having delightful winter weather, and for the last few days the bees have been enjoying a flight. All colonies seem to be pretty strong.

The American Bee Journal is all right, and I enjoy reading it very much. MRS. MARY A. RAY.

Adams Co., Ohio, Feb. 8.

Cold Weather—Observatory Hive.

The weather is unusually cold, but my bees are well prepared for winter on the summer stands, and are all in good condition.

The honey crop was not very good last year, not nearly so large as the year before.

I always read the American Bee Journal with much interest, and its coming is always welcome.

I had a glass hive for observation in our garden last summer. Its entrance opens through a fence, so the bees did not disturb, or were not disturbed, by the people looking at the hive. We found this hive much pleasure, and it had many visitors among our friends.

Newcastle, Dela., Jan. 9. MRS. E. G. BRADFORD.

An Experience With a Bear in an Apiary.

DEAR SISTERS:—How would you like to go out to the apiary some peaceful evening, to look at the skunk-traps, and have your vision confronted by overturned hives, and have the conviction assail you that the expected had happened just when you didn't expect it, and at last a bear had visited your bees? That was what happened to me last autumn.

I retreated in good order, returning with reinforcements, and my father and I spent a strenuous time righting the wreckage and killing bees on each other.

The next day we sent word to the third selectman to come to our aid with his bear-trap. The bear wouldn't notice that trap, but one of the cats did—he escaped by a miracle, with a flesh-wound from one of the teeth, which disabled a fore-leg for some time. That night we had the worst thunder-storm of the season. Quite late my sister and I went to see if the bear was in the trap—he wasn't. But he had had more honey, and had left another hive lying on its side, and papa and I once more righted things as well as we could. Before morning the bear upset that hive again and got some more honey.

About that time the postmaster offered his assistance, and it was arranged that he and the third selectman, and a young man that had been withdrawn from the hayfield on the doctor's orders (because an able-bodied young heifer had knocked him down and run over him), were to come the third night and shoot the bear. Well, he anticipated them and returned to the same hive for the third time; that was "three times and out" for the queen. Papa heard the fence break, and hurried to the apiary in time to see a big bear retreating in the late twilight across the narrow field in front of the hives. He seemed reluctant to leave his feast, looking back as he went.

The moon was young yet, and set early that night, and although the bear returned, he would not venture out from the thin growth of trees across the field until it was pitch dark. At last the three men waiting in the bushes determined to fire, and the three shots really "rang out as one." He was hit, and must have been wounded seriously, for he ran away with no care as to making a noise, leaving a trail of blood. They tracked him next day until the trail disappeared, and as he has not been back since, I hope the poor thief is dead.

When I regretted the inconclusive result, the third selectman said mournfully, "Nobody feels as badly as I do."

Here is a clipping which may be the sequel to the episode:

NOT A HOLE, BUT A BLACK BEAR.

The motto, "Look before you leap," has been handed down for generations and generations, but it is a curious fact that a person has never suggested the thought of "thinking before looking." If there had ever been a motto like the latter, it is probable that Gideon L. Joy would never have received the shock to his system that he experienced when he looked into a hole in the ground and found a big, black bear about three inches from his nose. Mr. Joy did not stay looking into that hole any longer than was necessary to recover from his astonishment, but got up, and the way he legged it for home and a gun would probably have made the bear laugh if he had stayed to witness Mr. Joy's sprinting act. When Mr. Joy returned with his rifle the bear was nowhere to be seen, nor has he been seen since. Mr. Joy will likely get his gun first and look afterward if such a case ever comes up again.—Kennebec Journal.

The clipping is from the New York Sun, but the item appeared originally in the Ellsworth American, our county paper. Mr. Joy mentioned is a neighbor of ours, and father-in-law of the third selectman. He said it was an "awful thin bear," and sent word that he thought it was the same one, "for he saw honey around its mouth!" Please put one of Dr. Miller's joke labels on that last statement.

You have missed me in making your list of sisters who are members of the National Bee-Keepers' Association; I am one-third of the membership from Maine. That is not so bad as North Carolina, but, still, Maine can not boast. I am wintering 36 colonies this season; they are packed on the summer stands, which is the way I have wintered ever since I began to keep bees, and so far my winter losses have been insignificant. My honey crops are insignificant, too, compared with yours of last summer. I am envious!

I hope Mrs. Griffith will have better success than I did on hatching hens' eggs over bees. I only succeeded in spoiling some eggs, and I am not a greenhorn at hatching eggs, either, having had considerable experience and varying results with both hens and incubators. I am afraid it won't do except in a warm climate. It was cold and rainy here, and one colony I had them on began to die of starvation before I was aware of their desperate state; of course, the eggs got stone cold. A. R. AUSTIN.

Hancock Co., Maine. Jan. 20.

I am very glad to add one more sister to the list of members of the National. The name appeared on the list merely as A. R. Austin, without any Miss or Mrs. attached to it.

Poor Season for Honey in 1903.

Last season was a poor one for honey. We got an average of 25 pounds per colony, fall count, and increased from 16 to 20. MRS. BEN FERGUSON.

Ford Co., Kans., Jan. 7.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

OWNERSHIP OF HONEY IN BEE-TREES.

Those Iowa boys that cut the bee-tree—something within me objects to calling them exactly thieves. The most widely spread feeling in regard to this matter is that wild bees and honey belong to the first finder, but that the tree they happen to be in belongs to the land-owner, of course. This general feeling looks to me like natural justice. With due apologies to the Iowa law and legal luminaries, the boys didn't steal anything from the man, but they cut his tree and trampled his corn, both damages that natural justice says should be paid for. We must grant that some States may have laws that do not conform to the above; and some localities may have public sentiment or usages that do not conform. Apparently the boys sized the man up, and decided that there was not much chance of getting their property with his permission. He had the possession, which is sometimes called nine points. Thereupon they took justice (and injustice, also) into their own hands—and it didn't pay. But 'spects we might any of us trust them to bring an uncounted sum of money home from town all the same. Page 820.

BEES DYING WITH CANDY ABOVE THEM.

Yes, good plan to keep in mind the fact that there is such a thing as a colony's starving to death with plenty of candy right over the cluster. It may not be very common, but dry candy, and dry air, and bees which can not spare any moisture from their bodies, spell death when the three letters are put together. Page 824.

POLLEN-BOUND COMBS—APIARY BULLETIN.

Mr. Blunk wonders what my mind is about combs blocked with pollen. Apparently he is already doing better than my experience has usually been. Guess we must each cut and try the different ways, and follow the way that succeeds for the time being. Conditions vary widely, and must be met accordingly. Solid pollen, dry, and permeated with white fungus, looking as if the cells had been filled neatly with white lead, well, I should say give *one* such in the middle of a new swarm. In four days look in, and whatever they have not dislodged cut it out, combs and all.

Bulletin-board, eh? Tip-top idea for forgetful folks. Obliged to see duty staring us in the face. I think none of the numerous published pictures of apiaries shows a bulletin-board. Don't think I ever heard of one. Here's a feather for his crown—inventor of the apiary bulletin-board! Still, "locality" may have its word to say. In some localities it may call down such a deluge of pestersome questions from outsiders that the owner may be glad to exchange it for my way. Well, what is my way? Paper fastened on a large cardboard, laid or hung where it will be handiest, and backed with a solemn resolution to look at it every day. Page 830.

GRAND CANYON—HOME OF BAD ANGELS.

The last front picture for the year 1903—Grand Canyon as Hutchinson gives us a peep into it, is a very *unearthly* sort of looking place. Still less does it look heavenly. Kind of a home of the bad angels, with the angels all gone on a vacation. (All gone but one, and he tempted 'em to go down.)

RULES FOR GRADING COMB HONEY.

Unpleasant to be cutting into honey, and so few buyers capable of judging it—presumably these are the reasons that grading rules do not demand high quality. Nevertheless I guess R. L. Taylor is right, that such a rule ought to go in. At least it would notify the many (who don't even know that much) that there is such a thing as good flavor and poor flavor in equally good-looking samples of honey. Page 835.

MOVING BEES BETTER THAN PLANTING FOR HONEY—SOMETIMES.

Sorry to have to tell John Kennedy and others that in a location where the natural flora are disinclined to "give down," the highly recommended plants will probably fail also, either in whole or in part. He has already seen it so with buckwheat. Moving bees to where the pasture is good may not seem an easy job, nor a desirable one; but there's more light and hope in it than in planting honey-plants on barren hills. Page 837.

ANSWERS BY PRIVATE MAIL.

And would he just send the answers by private mail, because they are so uncertain and unsatisfactory when printed in the Bee Journal? There you have it, Dr. Miller. Plenty of taffy ofttimes—once in awhile a fine bolus of anti-taffy to swallow. Page 838.

Maple Sugar and the Sugar Bush, by Prof. A. J. Cook; 44 pages; price, postpaid, 30 cents. This is by the same author as "The Bee-Keepers' Guide," and is most valuable to all who are interested in the product of our sugar-maples. No one who makes maple sugar or syrup should be without it. Order from the office of the American Bee Journal.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

What Caused Their Loss?—Langstroth Hive.

1. I had 14 colonies of bees, mostly blacks, last season, but I find on examining them, in their winter quarters, that I have only 5 living. The rest died with plenty of honey in the hives. They were packed in chaff, both in super and around the hive. Can you give me any reason for their demise?

2. I have been using 8-frame dovetailed hives, but wish to change to the Langstroth. As there are none in this locality, would you tell me the exact inside dimensions of same? ONTARIO.

ANSWERS.—1. The cold has been remarkably severe and long continued; the colonies ate up all the stores within reach, and the cold was so severe that it was death to leave the cluster to go for more, so they starved with plenty of honey in the hives, but not within reach. Under such circumstances the weakest colonies have the poorest chance.

2. The dovetailed and Langstroth are the same size. In fact, a dovetailed hive is nothing more nor less than a Langstroth hive with locked corners.

Bees Disappearing—Getting Increase—Strengthening Colonies.

June 28, two large first swarms issued and clustered together. I hived them in a new hive containing frames, but neither brood, comb, nor even foundation. I gave them boxes for surplus honey at once.

On July 9 I noticed a *lot* of them clustered on the front of the hive (the day was a hot one), and the next day they "lit out" for parts unknown without clustering at all. The next morning I tried to investigate conditions. I bungled the matter enough to break down about half the combs, and got discouraged, but found out this much: The 9 frames (Langstroth size) had been filled with comb. The 4 that broke down were over ⅔ full of honey; only a few cells of brood in those combs; just about bees enough left to cover the remaining 5 frames.

On Aug. 9 I looked for brood quite thoroughly, but found none. Two weeks later, on examination, I found plenty of brood.

1. What made them go in that way after getting to work?

2. I have 8 colonies now, apparently wintering well so far. I should like to increase, another season, to about 20 colonies. How is the best way to manage it so as to have them strong?

3. Two colonies are rather small. How can I strength them at setting-out time? NEW YORK.

ANSWERS.—1. I don't know. The great heat, especially if the hive was unprotected, may have had something to do with it. Are you sure they're all right now? No brood Aug. 8, and plenty of it two weeks later looks a little like laying workers.

2. I should need to be a little better acquainted with you to say just what plan for *you*, and perhaps I wouldn't know enough then. Much depends upon the season, and if you have a poor season you may be sure of weak colonies if you increase from 8 to 20, unless you feed. A safe way is to use the nucleus plan, at least for all increase after doubling, and at the last make everything strong from the start. Read, read. Study your bee-book carefully, as well as back numbers of your bee-papers, and when you are thoroughly familiar with principles you'll know better than I can tell you just what is the best way for you. If you are going to have as many as 20 colonies, one book is not enough for you. Neither is one paper.

3. You can't. At that time you would do more harm than good to take from stronger colonies to strengthen weaker ones. Keep them well protected, awaiting warmer weather, either letting them build up themselves, or giving them sealed brood from other colonies when any colonies become about strong enough to swarm.

Rearing Brood in February—Cellar Ventilation.

1. Will a colony rear brood in February or March if they have been given frames of sealed honey in the fall? I gave them outside frames, which, I don't think, had any pollen or bee-bread. This swarm I caught late in August, so they did not have time to procure stores for winter.

2. I carried my bees into the cellar, removed the honey-board, put a Hill's device over the brood-nest, made a cushion of burlap, filled it with chaff, put an empty super on top, and in it the cushion, and mashed it down firmly. What I want to know is this: Do I need to put on the cover? The cover is on now, but I find on examining them that moisture gathers around the edges, and the cushion feels a little damp. I thought by leaving the cover off, this might escape.

3. My cellar is 18x12 feet, and 6 feet high, no windows or doors. Now, as the snow has drifted over all, I have a trap-door from the kitchen only. I have 6 colonies in here. Do they want any ventilation from the outside?

Knowing nothing about bees, but having a liking for honey and the care of bees, I made a hive and fitted it with frames of my own manufacture. I do not know just the dimensions, but it was large enough, as you can see, for I took the honey out of one frame and it weighed 9 pounds, and the top-bars of the frames were only ¾ of an inch, and they were bent nearly to the bottom of the hive. The bottom is nailed on, with about ½ inch left for an entrance. The bees I purchased for $1.00 in June, from a neighbor. Now, this was 3 years ago, and I now have 6 colonies from this one, by natural swarming. What I was going to say is this: I have been unable to get a pound of surplus honey from this colony in all these years. They simply would not go in the sections any way I could fix them. I have removed the outside frames and put a shallow frame in its place until they had the foundation drawn, and then I removed it above, but they would not go an inch above the brood-nest. Wanting to increase as much as I could I have kept this colony, but another spring I will transfer to a modern hive. This colony has now about 4 inches of honey above all frames, and at the back end nearly to the bottom. I have been reading the American Bee Journal, also "Bees and Honey," and have found out my trouble with this colony. The other colonies I have from this one did well—and no trouble to get them in the sections. MICHIGAN.

ANSWERS.—1. A good colony wintered outdoors will be likely to rear brood before February is over, if it has pollen. If no pollen is present you need not expect brood till pollen can be gathered.

2. The moisture seems to indicate that the cover should be either removed or raised sufficiently for the escape of the watery vapor.

3. For so small a number of colonies there can be little need of ventilation from the outside. If the temperature keeps at about 45 degrees, and there is no mold, and no bad smell when you enter the cellar you need have little anxiety.

Management for Comb Honey.

1. I have 3 colonies of bees; some were caught last spring. Two of these colonies are on the brood-frames, and over the brood-chamber is a board—"a bee-board." Now, this board seems to be glued down by the bees. In the spring should I take the board off and put the supers over the brood-frames, or should I bore holes in the board and put the supers on top of it?

2. What time in the spring should I do this?

3. How much space should there be between the brood-frames and supers, or board, if left on?

4. Sections that have bee-ways on both sides, and where there is only one tier—should the top have a cover on, or should it be left open?

5. How can I tell when they are full?

6. Should sections have foundation at top and bottom, or is the top foundation enough?

7. How can I fasten this foundation? Can I do it without a machine? If so, how?

8. Will I have to smoke the bees when opening to place the supers on? How?

9. What size supers are the best?

10. One colony that I purchased is in a hive 3 stories high—the brood-chamber, and then two above that. The two have no super in, and it is so heavy that two men can hardly lift it, so I suppose the honey that is in there is in all shapes. What would you advise doing with that? Can I by any means place supers in it? If so, how?

11. Should foundation be placed in brood-frames? Should it be done the same as in sections? IOWA.

ANSWERS.—1. I suppose you mean that the hive has movable frames, and that a board covers these frames. The board should be removed when supers are given.

2. In your part of Iowa white clover is probably the first source of surplus honey, and you may give supers when clover first shows bloom.

3. About ¼ of an inch; less rather than more.

4. Unless the cover closes down within a quarter of an inch of the tops of the sections, there should be an inside cover of some kind. But if you have a good flow of honey you will find more than one tier necessary. Don't let your bees lack surplus room.

5. Look and see. Take off the cover, and if you find the sections sealed at top raise up the super and peep below to see if they are sealed down to the bottom.

6. Both ways are used. The bottom-starters makes a more sure thing of having the sections finished down to the bottom-bar.

7. It will pay to buy a machine. One way to do it without a machine is to run melted beeswax along the joint.

8. Unless the bees are very good-natured you will find smoke necessary. Use a bee-smoker.

9. That depends upon the size of your hive. The super should be large enough just to cover the hive.

10. It is perhaps a chaff hive, and if so you will find room enough to put supers inside.

11. Yes, at least you will probably find it best. Some use merely a small starter of foundation in brood-frames, but in that case the bees are likely to build too much drone-comb.

Some of these questions you will find answered in the bee-book you have, and it will pay you to study the book thoroughly.

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

FROM MANY FIELDS

Bees Did Well.

My bees did very well last year. I have 7 colonies, 3 Italians and 4 blacks. I took about 300 pounds of honey from the Italians. Three of the blacks held their own, and one I had to feed. In the spring I intend to kill all the black queens and introduce Italians.

F. G. ALLIN.

St. Louis Co., Mo., Jan. 29.

Not a Cold Winter.

This morning (for the first time during this winter) the thermometer went 2 degrees below zero. No snow yet, but we may get more than we like before bees swarm again.

WM. STOLLEY.

Hall Co., Nebr., Jan. 24.

Fine Season for Honey.

Last season was fine for honey; I got over a ton from 40 colonies, and could have gotten much more if I could have found time to care for the bees, but other work kept me busy so I had to neglect them.

I sold my honey at the house for 12½ cents per pound, and have it all sold. The honey was as fine as any I ever saw.

JOHN A. BLOCHER.

McLean Co., Ill., Jan. 12.

Swarms Deserting—Bulk Comb Honey.

Pass your cookies, Mr. Hasty. I would like to try them. I suppose they are real honey-cookies, as they should be. It doesn't pay to be too "dead sure" that my bees did not go to the woods (page 41).

I have neither strength nor inclination for anything but bee-culture, and loving it as I do, I am—well—"Johnnie on the spot," you might say. But my best reason, and one I would like to hear commented on, is just this: I have never, to my knowledge, had a colony of bees swarm after once beginning work in the super. I have been wanting to air that for a long time. Is it locality, or what is it? That it is not true of other places I know,

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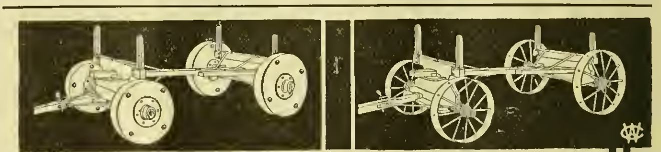

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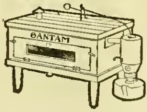

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else why are we advised to change the super from the parent colony to the new in certain cases? When I just can't induce the bees to begin work in the super, then I know there is swarming to be done, and it suits my condition to let them swarm.

While we have no large number of honey-plants scattered throughout the season, with the most of the crop coming in the fall, so that a colony that swarms will, in connection with the swarm, yield more honey than a colony that does not swarm at all. In fact, I have had a prime swarm store within 3 pounds of as much honey as the best one that never swarmed.

It seems, too, that when my bees make up their minds to swarm they just will. I have cut out queen-cells and had them swarm, leaving the parent colony hopelessly queenless, and that, too, after putting them back every day for nearly a week, until I gave up in despair and gave them a new hive.

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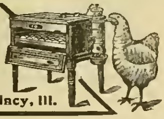

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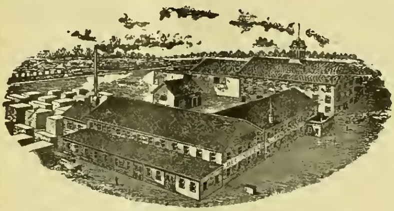

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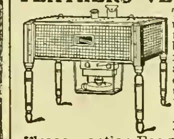

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handle honey. In "Gleanings in Bee-Culture," H. H. Root puts bulk honey as a possible fourth class of honey, giving comb (section honey) first, extracted second, and candied honey as coming third class. If 10 years, or less, doesn't see bulk honey at the head of the list, it will be my turn to furnish the "cookies." J. T. RENO, JR.

Cedar Co., Mo., Jan. 23.

Trembles for Outdoor Bees.

It is 15 degrees below zero here this morning, and now at 11 a. m., though the sun is shining brightly, not up to zero yet. We have been, and *are*, having the most severe winter I have any recollection of. Bees have had no flight, nor scarcely a chance to move more than a couple of times since the middle of November. I tremble for those packed on the summer stands. MORLEY PETTIT.

Ontario, Canada, Jan. 25.

Feeding Bees—Bottom-Boards—Bee-Brushes.

I feed bees as follows: Put a heavy cloth over the frames to retain the heat, cut a slot in the cloth toward the front end of the frames 1 inch wide, then put on an empty super over the cloth, put the bee-feed in a 2-quart tin basin, cover the syrup or honey with excelsior, and the bees will do the rest.

I also make bottom-boards as follows: Get lumber full width if you can, if not make them of two pieces; cut them 24 inches long. Now rip a common lath in two strips, and nail the strips on the bottom-board for the hive to rest on. Nail two solid strips under the bot-

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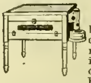

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tom-board to hold them rigid, or together; being cut 24 inches long gives the bees a good alighting-board. I think bottom-boards sent out with hives are too short.

There has been quite a discussion about bee-brushes. I like the one I use. It is simply some broom-corn tops tied into a round bundle, 2½ inches thick at the butt. Cut it so as to be 18 inches long, throw out seed, and you will have a good bee-brush.

C. W. COOLER.

Wright Co., Iowa, Jan. 29.

CONVENTION NOTICES.

Michigan.—The Northern Michigan bee-keepers will hold their annual convention March 30 and 31, 1904, in the Montague Hall, 127 Front St., Traverse City, Mich.

GEO. H. KIRKPATRICK, Pres.

Rapid City, Mich.

Kansas.—There will be a meeting of the Arkansas Valley Bee-Keepers' Association, at Hutchinson, Kans., Mar. 5, at 10 a.m. All bee-keepers and others interested are respectfully invited to be present. FRED WILBER, Sec.

Utah.—The spring convention of the Utah Bee-Keepers' Association will be held April 5, at 10 a.m. and 4:30 p.m. Among other important questions to be considered will be the World's Fair, our State Fair, and the Portland Fair of 1905. We also desire to formulate some plan, if possible, to further increase the fraternal interest for the mutual benefit of our bee-keepers. We cordially invite all bee-keepers to be present. We also invite them without delay to send in their views on these and other topics. The convention will be held in the City and County building, in Salt Lake City.

Salt Lake City, Utah. E. S. LOVESY, Pres.

Michigan.—The Michigan State Bee-Keepers' Association will hold its annual convention, Thursday and Friday, Feb. 25 and 26, at the Agricultural College. The Michigan State Dairymen's Convention will meet at the same place, Tuesday, Wednesday and Thursday, and the round-up institute of the farmers' institutes will be held at the same place from Feb. 23 to 26. One session of the Dairymen's Convention will be a joint session with the institute, and one session of the bee-keepers' convention will be a joint session with the institute. There will be half fare on all Michigan railroads. Dinner and supper can be secured at the College; but visitors will have to go to Lansing for breakfast and lodging. There is an electric line that takes passengers from the College to Lansing for 5 cents. W. Z. HUTCHINSON.

CHICKS THAT LIVE
get strong and healthy—gain steadily in weight, are chicks hatched in Reliable Incubators.
The Reliable
provides automatically a constant current of odorless, warm air at a uniform temperature—chicks pip, hatch and thrive under its nature-like conditions. Send 10 cents and get our 20th annual catalog—full of poultry information.
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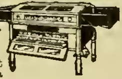

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Send for our FREE CATALOG. It will tell you how to put foundation in four sections at once; and the only way to get a full section of honey.
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that Page-Wire is twice as strong as common wire of the same size. Try it, and prove it.
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3 and 5 banded Goldens from a reliable breeder. You all know him—DANIEL WURTH—the Queen Specialist—who fills orders by Return Mail. I am here to stay, and thank my many friends and patrons for their liberal patronage in the past. Wishing you all a Happy New Year, I am ready as usual to furnish you with the best of Queens. Tested, in March and April, $1.25 each; Untested, in April and May, $1.00 each; 6 for $5.00. Breeders, yellow all over, $3.00 each. I am booking orders for early delivery
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That covers the whole Apicultural Field more completely than any other published, send $1.20 to
Prof. A. J. Cook, Claremont, Cal.,
—FOR HIS—
"Bee-Keeper's Guide."
-al Discounts to the Trade.

Wholesale Honey.
We need a few thousand pounds more of Comb Honey for our trade in Cleveland and Indianapolis. Any person, any where, who wants to cash up his Honey Crop at a wholesale price, we would be pleased to hear from, with complete description and lowest price delivered to their depot. West of Kansas City and Omaha it should be in car-lots.
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BINGHAM'S PATENT Smokers
25 years the best. Send for Circular.
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Wanted To buy FANCY COMB HONEY in no-drip cases; also White Clover Extracted; spot cash
C. M. SCOTT & CO.
1004 E. Wash. Street, INDIANAPOLIS, IND.
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WANTED! FANCY COMB HONEY
In no-drip shipping-cases. Also Amber Extracted in barrels or cans. Quote your best price delivered Cincinnati. The Fred W. Muth Co.
32Atf Front and Walnut, CINCINNATI, OHIO

GOOD BEE-HIVE CHEAP!
Called the poor man's hive. Either 8 frame or 10. Sections sold at last year's prices. Full line of SUPPLIES. Subscription to bee-journals with orders. Send for list.
R. D. 3. W. D. SOPER, Jackson, Mich.
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WE SELL ROOT'S GOODS IN MICHIGAN
Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Four percent off for cash orders in December. M. H. HUNT & SON,
BELL BRANCH, WAYNE CO., MICH.

Oldest Bee-Supply House in
—MISSOURI—
Your wants fully supplied with anything needed in the Apiary. FULL STOCK OF A. I. ROOT CO'S GOODS; Danzenbaker Hives, etc. Let us mail you our 40-page Catalog. FREE.
JOHN NEBEL & SON,
7Dtf HIGH HILL, Montg. Co., MO.

HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, Feb. 8.—The demand is better for all grades of honey than at any time since the beginning of December of last year. Stocks are now being reduced, but at the same time prices are easy. Many have had it so long that they are anxious to make sales. No. 1 to fancy white comb honey sells at 12@13c; amber grades, 10@11c; dark, etc., 9@10c. Extracted, white, 6@7c, according to quality, kind and flavor; amber, 5@6c. Beeswax, 30c.

R. A. BURNETT & CO.

CINCINNATI, Feb. 8.—There is a fair demand for honey, but nearing the end of the season for comb honey, with large supply, has pressed the prices; fancy white, 13@14c; amber, in barrels, 5¼@5¾c; in cans, ½c more; alfalfa, water-white, 6@6½c; fancy white clover, 7½@8c. Beeswax, 30c. C. H. W. WEBER.

PHILADELPHIA, Feb. 8.—There has been a decided decline in comb honey since last quotations. Bee men who have little lots held back and are afraid they can't dispose of it before warm weather, are shipping it in, selling at any price they can get, breaking the market decidedly. We would quote fancy white at 14@15c; No. 1, at 12@13c; amber, 10c. Extracted, white, 6@7c; amber, 5@6c. Beeswax, 31c. We are producers of honey and do not handle on commission. WM. A. SELSER.

CINCINNATI, Jan. 25.—The demand for honey shows little life at the present time. Have an ample supply, although we are looking for a revival of trade in the near future. Prices are declining, owing to the superfluous quantity in this country. We are selling amber extracted in barrels at 5¼@6c; white clover, 6½@8c, according to quality. Fancy comb honey selling slow at 14@15c. Beeswax, good demand, at 30c.

THE FRED W. MUTH CO.

ALBANY, N. Y., Feb. 1.—Honey demand very light. Prices of comb honey are largely now what the buyers will offer—from 10@15c. We look for better demand when weather is warmer. Extracted doing some better at 7c for white, 6½c for mixed, and 5½@6c for dark and buckwheat. Beeswax, 28@30c.

H. R. WRIGHT.

BOSTON, Feb. 9.—There is little change to note in the honey market. Strictly fancy Eastern honey is scarce. Western honey will not bring as much here. We quote fancy white in glass-front cases at 16c; No. 1, at 15c. Supply is ample, and demand light at this time. Extracted, water-white, 8c; light amber, 7@8c; with but little call for dark Florida.

BLAKE, SCOTT & LEE.

KANSAS CITY, Feb. 9.—Another cut in the price of comb honey since our last quotations. Strictly No. 1 white comb was sold at $2.25 per case of 24 sections. We are holding our stock at $2.50, with the hope of a better market, but if shipments continue, we will have to let go with the rest. The supply of extracted is large, and the demand light, at 6½@7c for white, and amber at 5½@6c. Beeswax in demand at 30c.

C. C. CLEMONS & CO.

NEW YORK, Dec. 4.—Comb honey is arriving in sufficient quantities to supply the demand, and, as to the quality, most of the white honey seems to be off color, more or less. We quote fancy white at 14c; No. 1 at 13c; amber, 11@12c; and buckwheat, 10c. Extracted, light amber, at 6c; white, 6½c; Southern, 55@60c per gallon; buckwheat, 5½c. Beeswax, 28@29c.

HILDRETH & SEGELKEN.

SAN FRANCISCO, Feb. 3.—White comb, 1-lb. frames, 12½@13c; amber, 9@11c. Extracted, white, 5½@6c; light amber, 4½@5c; amber, 4@4½c; dark amber, 3½@4c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

The same quiet condition previously noted is prevailing in the honey market. In quotable values there are no changes to note, but large sales are not possible at full figures. That the coming crop in this State will be light seems to be now very clearly foreshadowed.

HONEY AND BEESWAX
When consigning, buying or selling, consult
R. A. BURNETT & CO.,
199 SOUTH WATER ST. CHICAGO, ILL.
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The Best Bee-Goods in the World....

are no better than those we make, and the chances are that they are not so good. If you buy of us **you will not be disappointed. We are undersold by no one.** Send for new catalog and price-list and free copy of THE AMERICAN BEE-KEEPER; in its thirteenth year; 50 cents a year; especially for beginners.

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W. T. Falconer Mfg. Co.,

JAMESTOWN, N. Y.

W. M. GERRISH, Epping, N.H., carries a full line of our goods at catalog prices. Order of him and save the freight.

I. J. STRINGHAM, 105 Park Place,

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Manufactures and carries in stock every article a bee-keeper uses. BEES AND QUEENS IN SEASON.

Apiaries—Glen Cove, L.I. Catalog free.

20,000 POUNDS OF

PURE EXTRACTED HONEY.

If you need any for your home trade, write us at once.

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AT LOWEST PRICES possible.

Catalog free.

LEAHY MFG. CO.,

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Don't Wait Any Longer to Buy.

Big Discount for Orders Now.

Write us to-day and say what you want, and get our prices. New catalog of 84 pages; it is free.

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Money in Bees for you.

Catalog price on

ROOT'S SUPPLIES.

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Up First Flight.

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Fine Italian Queen Bees

Orders booked now and filled in rotation. Send for price-list.

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Why does it sell so well? Because it has always given better satisfaction than any other. Because in 26 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

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OF ALL KINDS.

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The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

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Everything the Bee-Keeper Needs.

G. B. Lewis Company

Watertown, Wis.

Reappearance of Foul Brood.
C. H. W. WEBER.

Chicago-Northwestern Report.
[See page 137.]

AMERICAN BEE JOURNAL

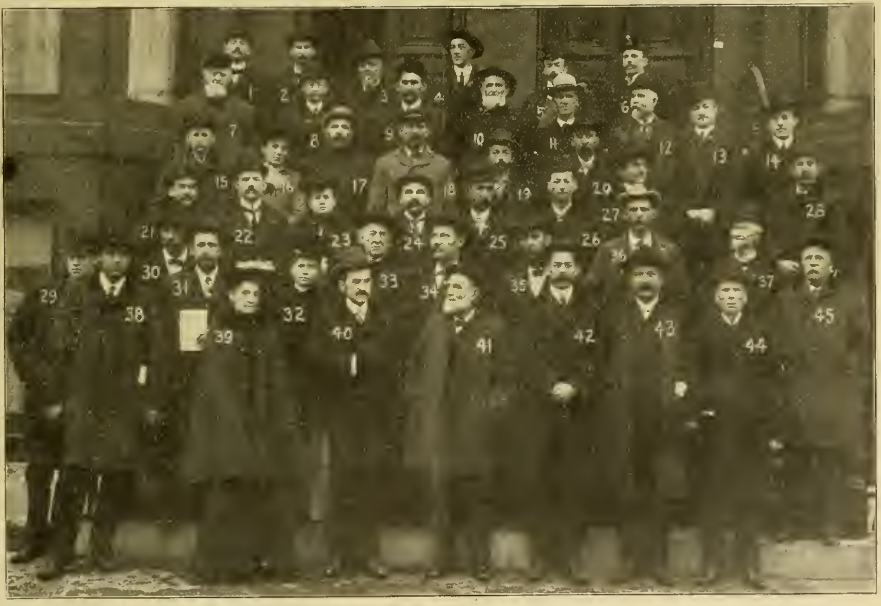
WEEKLY—$1.00 A YEAR.

Published by GEORGE W. YORK & CO., 144 & 146 E. Erie Street.

44th Year. CHICAGO, ILL., FEB. 25, 1904. No. 8.

Part of the Chicago-Northwestern Bee-Keepers' Convention,

(Held in Chicago Dec. 2 and 3, 1903.)



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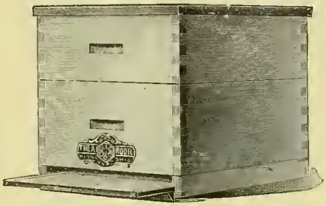
THE VOICE OF THE PEOPLE

DANZENBAKER'S HIVE.



MORE HONEY. BETTER PRICES.

WE HAVE TOLD YOU SOME THINGS

—ABOUT THE—

DANZENBAKER HIVE

FOR COMB HONEY.

NOW SEE WHAT OTHERS SAY.

MORE HONEY.

UNION BRIDGE, MD. Feb. 9, 1904.
The A. I. Root Co., Medina, O.

Gentlemen:—I saw in a recent issue of your paper that you have a department called "Reports Encouraging." I shall send you my report.

I use the Danzenbaker hive and will give you report of the same, as the few dovetailed hives that I use do not compare at all with the Danzenbaker. One colony gave me over one hundred pounds No. 1 white honey and the rest averaged about sixty, with an increase by natural swarming of one hundred per cent. A friend of mine who uses all sorts and kinds of hives in his apiary succeeded in making scarcely enough honey to pay for the foundation used in the sections. This was about two miles from my apiary. Long live the Danzenbaker hive! It is just the thing for this locality.

Yours truly,
J. B. HOLLOPETER.

MALLET CREEK, O., Sept. 25, 1902.

I have now 250 colonies of bees, of which 170 are in the Danzenbaker hives, and shall have all my bees in Danzenbaker hives next spring. During this past poor season, 30 or 40 of the colonies in the Danzenbaker hives gave over 100 lbs. surplus. On the average I get more than double the amount of honey from these colonies that I do from those in the old chaff hives. With a 7-inch telescopic cover, the Danzenbaker hive winters the bees better than the chaff hives.

VERNON BURT.

MORE HONEY AND BETTER PRICES.

I have used both square and tall sections in all my apiaries five years, and know from practical experience that it will pay to discard the 4¼ sections, and use only 4x5 sections, and the Danzenbaker hive with the fence separator. They have made enough more this season in the same yard to pay for the hives. I have made *more money* this season per hive than I have any previous year in my 15 years of bee-keeping. Fifteen of my strongest Danzenbaker hives made me a ton of honey. When it comes to sales I get more for the 4x5 sections, and have no work in cleaning them. I ship them as I take them from the super. This is not the case with the 4¼ section. I make honey to sell, and anything that sells the best, and for the most money is what I want out of the bee-business.

S. D. MATTHEWS.

In Gleanings, p. 931, Dec. 15, 1899.

MOUNTAIN VIEW, N. J., Oct. 6, 1897.

I have run my hives largely with the Danzenbaker sections this year, and shall increase my facilities for the Danzenbaker output next year. I sold all my fancy clover in Danzenbaker sections, glazed, to two fancy grocers in New York, at 20 cts. a section; were retailed at 25 cts. each. My 4¼ sections, unglazed, sold to grocers at 12½ to 13 cts., retailing 16 cts. I furnished cartons with the 4¼, which cost nearly as much as glass.

B. F ONDERDONK.

BETTER PRICES FOR DANZY. HONEY.

ROCK VALLEY, N. Y., Feb. 22, 1901.

My bees gathered no surplus after July 1. I had only 1200 lbs., but I obtained a fancy price—15½ for "Fancy" and No. 1 white, and 14½ for No. 2 here at my station for all the Danzenbaker 4x5 plain sections, used on your hives, while I got only 14 and 13 cts. per lb. for the 4¼x4¼ square sections, and I consider that much difference is worth looking after—don't you? The Danzenbaker hives doubled up, two brood-chambers, are in fine condition, even better than my double-walled hives. I intend to build a bee-cellar and work off my double-walled hives as fast as I can, and get the Danzenbaker hives.

Very truly yours,
J. L. HAIGHT.

It is not claimed that so large an advance in price as is mentioned above can usually be obtained for honey in Danzenbaker sections, but because it is more uniformly fancy grade, and of general better appearance it commands the highest prices and a more ready sale in a dull market than ordinary honey.

A RECENT ORDER.

INDIANAPOLIS, IND., Feb. 3, 1904.
The A. I. Root Co., Medina, O.

Dear Sirs:- Please ship to me as soon as convenient: 500 Danzy. AD64M hives.

Yours,
WALTER S. POUDER.

(This is in addition to all other orders.)

64-PAGE BOOK.

Mr. Danzenbaker's little book, "Facts About Bees," containing 70 pages, giving full particulars regarding this hive and system, is indeed full of facts. If one follows the directions clear through, he is sure to produce a strictly first-class article of comb honey, providing of course there is any honey to be had. This unique little book will be sent free to all who apply for it.

Bee-keepers are raising honey for the money there is in it, or for the pleasure they get out of it. It is conceded by all who have tried this system that it is highly profitable. Reading over letters from the users of this hive who tell of securing large crops of honey almost free from propolis makes us think that the bee-keeper who is in the business for pleasure would be highly gratified with the hive also. What is more satisfying than to take off well-filled supers of snow-white sections free from the propolis that is so often found on sections in cases that are poorly constructed and adapted for the production of a fancy article?

SPECIAL NOTICE.

The great popularity of the Danzenbaker hive has brought the shallow brood-frame and the tall plain sections into prominence. It must be remembered that no other hive contains the essential features of the Danzenbaker. The success of this system depends on having everything just right, so you should place your order for the Danzenbaker hive with our main office, or any of our branches or regular agents.

THE A. I. ROOT COMPANY,

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(See list of Jobbing Agents in American Bee Journal, Jan. 7, page 2.)

AMERICAN
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THE OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL
Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

GEORGE W. YORK, Editor. CHICAGO, ILL., FEB. 25, 1904. Vol. XLIV—No. 8.

Editorial Comments

Another Double Number.

Here we are with another double number of the old American Bee Journal. We just had to do it. The report of the last Chicago-Northwestern convention is a long one. But we have evidence that it is appreciated by many of our readers. We have quite a good deal of most excellent reading matter on hand that we hope to reach very soon. We are doing the best we can to get caught up with it.

Improved Queens—Improved Bee-Keeping.

Some one has well said: "Tell me what you are doing to improve your queens, and I will tell you what you are doing to improve your bee-keeping."

A Severe Winter in the North.

Whatever may be the weather for the rest of the winter, over a large scope of territory in the North the cold has been so long and so continuous as to awaken grave fears for the outcome of colonies of bees wintered outdoors. Very strong colonies well protected may suffer little, but those that do not come up to the mark in strength, especially if poorly protected, will many of them succumb, and those that remain will have a tough pull to get into any sort of working order by the time of harvest.

The most that the bee-keeper can now do is to possess his soul in patience—perhaps, rather, in impatience—and hope that very soon there may come a day warm enough for a flight; but it may do some good for him to set his teeth together a little more firmly than ever before, and make a very strong resolve that hereafter he will not be caught with any but very strong colonies for winter, protected to the best of his ability. Some may think it wise to resort to cellar-wintering, in that border-line where it is hard to decide whether out or in-door wintering is best.

Wind the Bees Worst Enemy.

Dobbratz, in Praktischer Wegweiser, pronounces it the wind, and urges strongly the providing of proper windbreaks by fences or hedges, especially evergreen hedges.

Sweet Clover Bacteria for Alfalfa.

According to the National Stockman, the Agricultural Experiment Station of Illinois has determined that it is not necessary to obtain soil from alfalfa regions with which to inoculate the soil in the East. It was a matter of rejoicing to learn that alfalfa could be successfully grown on Eastern soil at no greater expense than the procuring of a small quantity of properly infected soil from some alfalfa-growing region. Fifty or 100 pounds of such soil scattered over an acre of ground would serve to supply it with the necessary bacteria, and with a small start the thing could be continued indefinitely. Now, even the small trouble of sending off for the necessary bit of infected soil as a start is to be saved, if there be no mistake in the case. All that is necessary is to find a spot where sweet clover flourishes—where abundant nodules are found on the roots—and a small quantity of this soil can be taken to inoculate the soil where alfalfa is to be grown.

For many farmers east of the Mississippi success in growing alfalfa will be a great thing. For bee-keepers it will have little interest unless alfalfa yields honey, and a number where alfalfa has been grown east of the Mississippi have reported utter failure in that regard. A few, however, have reported success, and if a single man has succeeded in getting crops of honey from alfalfa in a region where it is in general a failure, there is ground for belief that when the right conditions of soil are attained others may have equal success. So let us hope.

Failing Competition.

Here are some words wisely said by the Bee-Keepers' Review, the pity of it being that the very ones who need them most will never see them:

> Failing competition is the worst competition that a man can have. A merchant may be able to withstand the competition of a successful competitor, but the competitor who fails in business, and his goods are sold at a sheriff's sale—that is the kind of competition that cuts the ground from under a competitor. Bee-keepers have that kind of competition to contend with in the shape of the farmer with a few colonies of bees, who takes his honey to market and sells it for what he can get. Some have said: "You must be a poor bee-keeper if you can't produce honey as cheaply as the farmer bee-keeper." Let the farmer bee-keeper try to make his living producing honey in this way, and marketing it in this manner, and see how he will come out. The facts of the case are, that his honey costs him more than he sells it for, only he doesn't know it. It is competition of the failing kind.

A Bacillus Gaytoni.

A new disease is under discussion in foreign bee-journals as produced by Bacillus Gaytoni. Bacillus Gaytoni is nothing more nor less than the microbe of bee-paralysis, according to Cheshire.

Extracting and Marketing Unripe Honey.

One of the things—in many cases it may be said *the* thing—that has done more than all else to injure the sale of extracted honey, is the putting upon the market honey that is not well ripened. Such honey does not improve in quality after it leaves the hands of the producer; generally, if not always, it deteriorates, sometimes so much that the producer would not recognize it as the honey he extracted. It becomes thin, inclined to sour, with a flavor so vile that it is not fit to put on the table. If the one who puts such honey on the market were the only one affected by it, it would be less matter. But the whole market is to some extent affected. The consumer who gets a sample of such honey is easily persuaded to believe that it is no longer possible to get honey that is pure, or if he believes it pure he concludes that he is not fond of honey, and does not care for more.

What are the inducements to extracting unripe honey? One is, that it saves labor to extract before the honey is sealed. But the mere saving of the labor of uncapping would be but a small inducement were it not for the other and greater inducement of the larger quantity. To get just a little more honey by extracting before uncapping, some are willing to spoil the future chances of themselves and others for the sake of the present gain.

Now comes Editor Hill, of the American Bee-Keeper, backed by no less an authority than the veteran O. O. Poppleton, saying that *there is nothing gained in quantity* by extracting before ripening. Ninety percent of the total evaporation occurs during the first night in the hive, and the further improvement is not so much a matter of evaporation as a matter of influence caused by the presence of the bees, an influence subtle, but positively known to every experienced apiarist, whereby the honey slowly but surely attains that degree of body and flavor that makes the consumer who samples it wish for more.

The experiment stations would be doing good service if they would decide for us just how much can be gained in weight by extracting unripe honey, but a little thinking ought to convince any one that the amount must be very small compared with the large amount of mischief caused by placing such honey on the market. On any good honey-day, take out a brood-comb and you can shake out easily the nectar—not honey—therein contained; but go the next morning before the bees have had time to do any gathering, and no nectar will be found.

It can hardly be too strongly emphasized, that the gain to the man who puts unripe honey on the market, if in any sense a gain at all, is overbalanced by the resulting loss to himself, besides doing an irreparable mischief to all other producers.

Some Expert Opinion

"In the multitude of counsellors there is safety."—BIBLE.

Thickness of Brood-Frame Top-Bar.

If for some reason you were to start in anew to keep bees, and were obliged to get an entirely new outfit—

Ques. 6.—Would you use a frame with thick top-bar? If so, why? If not, why?

N. E. FRANCE (Wis.)—¾-inch top-bar; ⅞x⅜ inch for the rest of the frame.

P. H. ELWOOD (N. Y.)—Yes, a half-inch, to make it solid enough not to sag.

EUGENE SECOR (Iowa)—Yes. If properly spaced they almost prevent bridging.

WM. ROHRIG (Mo.)—Yes. They do not sag, and burr-combs are not so troublesome.

MRS. L. HARRISON (Ill.)—No. The regular Langstroth frame is good enough for me.

R. L. TAYLOR (Mich.)—No. Because it takes room, and its advantage is no advantage to me.

DR. C. C. MILLER (Ill.)—Yes. No sag; makes whiter sections to have them farther from the brood-combs.

J. M. HAMBAUGH (Calif.)—Yes; at least ¾ of an inch thick. Obviate the brace-comb nuisance largely.

ADRIAN GETAZ (Tenn.)—Yes. Sufficiently thick and wide to practically prevent burr and brace combs.

JAS. A. STONE (Ill.)—I have never used the thick top-bar till this season, and am not ready to give my preference.

GEO. W. BRODBECK (Calif.)—Yes. Not so apt to sag, and the bees are not so inclined to extend their combs, etc.

C. P. DADANT (Ill.)—Yes. Because it makes a strong frame, and in a great measure prevents the building of burr-combs.

O. O. POPPLETON (Fla.)—No. I use close-fitting top-bars which does away with all of the supposed need of thick top-bars.

PROF. A. J. COOK (Calif.)—Yes. It is proof against sagging; is strong, and with such we are not so much in need of queen-excluding honey-boards.

G. M. DOOLITTLE (N. Y.)—7-16 of an inch is the thickness I use for the top-bar to a Langstroth frame. Some call that thick; others thin. I think it just right.

DR. J. P. H. BROWN (Ga.)—I would use a top-bar 5-16 thick, with a triangular comb-guide. Such bar will not sag, and has advantages over a thinner bar and over a thicker one.

C. DAVENPORT (Minn.)—I would use a frame ⅝ thick, 1 1-16 wide. A thinner top-bar is liable to sag, and a thicker one is a waste of lumber and hive-space, in my opinion.

E. E. HASTY (Ohio)—Thick enough to make sure against sagging, but not so thick as some would choose. Have got used to my burr-combs, and do not dread them as much as some do.

C. H. DIBBERN (Ill.)—I use frames with ¾-inch top and bottom bars, and think they stand the wear and tear of handling better than thinner bars. There is also much less burr and brace comb built when such bars are used.

E. WHITCOMB (Nebr.)—Yes. First, they are stronger for extracting. There is more to begin with and to end up at in wiring, and they should, if thick top-bars, be self-spacing, which is a great saving of time in replacing the frames.

J. A. GREEN (Colo.)—No. In a double brood-chamber hive a thick top-bar would separate the two divisions of the brood-chamber too much. If I were to use a frame of the Langstroth depth, I would use a thick top-bar. Because it would largely prevent the building of burr-combs.

G. W. DEMAREE (Ky.)—No. That is, I would not have the top-bars of my frames any thicker than is necessary to keep the top-bar of the frame from "sagging." Why? Because a too-thick top-bar is a waste of room, and invites the bees to increase the nuisance known as burr-combs between the top-bars.

L. STACHELHAUSEN (Tex.)—No. Thick top-bars are not necessary in shallow-frames; wide and thick top-bars are a hindrance for bees and the queen. I estimate more wood as ⅞x⅜ inches in the top-bar as an intolerable nuisance, diminishing the development of the colony, and reducing the honey crop considerably.

MRS. J. M. NULL (Mo.)—I prefer to have the top-bar of just sufficient thickness to secure the strength needed. I prefer honey in the brood-nest or super to wood. I practice outdoor wintering, and want all the honey along the top of the combs I can secure. Under peculiar conditions it might mean the saving of a colony.

E. S. LOVESY (Utah)—I would not want a very deep top-bar. I use one consisting of a strip ⅝ scant by 1 3-16 cut the required length, then I nail a trianglar strip in the center of the first strip or top-bar, each angle being about ¾ of an inch, and cut the required length to form a shoulder for a self-spacing end. This makes a good frame, and at small cost.

REV. M. MAHIN (Ind.)—I would not. I have always used top-bars only ½ inch thick, and burr-combs and all that sort of thing give me no trouble. If the bees build bits of comb between the top-bar and the sections, or the extracting frames, I shave them off with a putty-knife, and it is quickly and easily done. A thick top-bar takes up too much valuable room.

S. T. PETTIT (Ont.)—No. Because, 1st, they cost more; 2d, they add unnecessary weight; 3d, they unnecessarily occupy valuable space in the hive; 4th, bees winter better on thin top-bars, because they will more readily pass over a thin one than a thick one; 5th, there will be much less burr-combs and brace-combs between thin top-bars than between thick ones. More than 30 years of observations and severe experimentations have removed every doubt of my position from my mind. Although I have admitted the necessity of care against old, black wax from the brood-chamber, finding its way into the comb-honey supers, I never have suffered from that cause. I was influenced by the writings of others; but if in reality there is any danger, I would use other means than thick top-bars.

R. C. AIKIN (Colo.)—I do not use the thick tops; here I am again ferninst the hive-makers, and have to have my frames a special order. I am speaking of Langstroth frames now. The very fellows that will jump onto my divisible brood-chamber hive, roaring about the bees' "brooding sticks and spaces," will put a great lot of wood in a top-bar, 1 inch, a space above that, and ⅜ more for the pattern-slat between the brood and sections; then kick when we say honey-board to them. Well, a honey-board added to all that would make it a long way up to the sections.

I use top-bars, in Langstroth frames, ½ inch thick (deep), and without any kerf or groove for foundation, putting starters on with melted wax. Those saw-kerf-wedge things are a nuisance; the wedges shrink and fall out, even when they have been *pounded* in. The melted-wax plan is almost as speedy, if not fully so, and better, and leaves a smooth top-bar to scrape clean of wax if one ever wants to scrape it. An additional half-inch depth to a top-bar is so very trifling more protection against burr-combs that it does not pay at all. Put that half-inch into a honey-board, and it will do ten times as much good against burr-combs. A honey-board is an absolute necessity sometimes, and always valuable; no hive should be without one.

Contributed Articles

Reappearance of Foul Brood—Preventing It.

BY C. H. W. WEBER.

IN 1875, Hilbert discovered that bacteria are the originators of many infectious diseases.

In 1854, Cohn proved the vegetable nature of bacteria, and showed that foul brood was caused by those bacteria.

Dr. Kolbe advocated salicylic acid for curing foul brood. Since then, it has been proven, that the treatment of foul-brood colonies with antiseptics is insufficient, and that a successful cure is only to be expected of the colonies of bees themselves, and of their natural treatment and development.

In 1883, the creator of foul brood was described by Cheshire and Cheyne as a thin bacillus slightly rounded on each end, having a length of 3-5 to 4 thousandths millimeter, and only colored with difficulty; they named it "Bacillus alvei." The temperature most favorable for its development is 37.5 degrees R., or 115 degrees F. (Maximum 47 degrees R., minimum 16 degrees R.) The spores, which are thicker than the actual bacillus, are formed on the ends of the bacillus which assume the form of a spindle; during the formation of spores, they can be killed on being boiled for three hours.

Prof. Harrison discovered that development of the bacillus alvei is stopped by beta-naphtol, also by formic acid, formaldehyde and thymol. On adding 10 percent of formic acid to the food in the cells for the larvæ the formation of the Bacillus alvei is prevented.

By my own experiments and trials with the foul-brood germ I learned that the fumes of formalin will kill the bacteria and spores on coming in contact with them. Thus far it was thought that Bacillus alvei was a particular variety of bacterium, only found in colonies of bees; but September, 1902, Dr. Lambotte, of the University of Leige, published that by careful examination he found that the bacillus alvci is identical with the bacillus mesentericus vulgaris, so plentifully found in Nature.

From Fluegge and Migula we know that, first, the bacillus mesentericus vulgatus is found on potatoes and milk, especially in the ground. Second, that the bacillus mesentericus fuscus is found on potato pealing and in the air. Third, that according to Globig, the bacillus mesentericus ruber is usually found on potatoes. To these three varieties Dr. Lambotte adds as a fourth the bacillus mesentericus vulgaris, which species appears especially upon ill-kept bread, and which is said to be identical with the originator of foul brood. It is expected that other bacteriologists will confirm Dr. Lambotte's statement.

The observations of Lambotte explain why so many bee-colonies become affected with foul brood, where any contagion from other colonies is excluded or absolutely impossible. They also prove that the destruction or burning of the affected colonies is insufficient for the successful extermination of the foul brood. Of what avail will the destruction of affected colonies be when the cause of the disease is spread over the entire universe, in the ground, in the air, on the plants and fruits?

Mehring writes in his book, that foul brood of the worst form can be produced by feeding a colony with the juice of dried fruit, which had been cooked and sweetened with sugar. This shows that the bacteria must be on fruits.

Phil. Reidenbach says: "The foul brood bacteria have not such destructive peculiarities that a larva, coming in contact with it, must get sick and die." Then he says, that he made a one percent solution of foul-brood combs in water; this he added to the food for the larvæ of different ages in the cells by means of a camel's-hair brush. In spite of this, all larvæ developed into bees in due time, only when he introduced the pure foul brood to the food in the cells, the larvæ died, but the colony did not become affected with foul brood on that account, for the dead larvæ were removed by the bees and the colony had been primarily a strong one.

Some bee-keepers claim that they give frames affected with foul brood to strong, healthy colonies in order to reclean them, without any sign of sickness or disease being perceptible later on. Formerly it was customary to fight against the foul brood by means of disinfectants, however, without any satisfactory results being obtained; finally, the bacteriologists came to the conclusion that the bacillus was merely killed, but not the spores, for whose extermination the disinfectants would have to be so highly concentrated that the bees were unable to endure it. If weaker substances, for instance a solution of formaldehyde were used, the malady was checked for the time being, but reappeared when the treatment was discontinued. These failures created a feeling of discouragement, and it was considered as foolish to try to cure the malady on these principles. But it is not quite so bad as it seems to be, for the hard work the bee-keeper undertakes by trying to disinfect his bees, the bees themselves willingly relieve him of, because Nature has fitted them out to best perform this work themselves. The bees are best adapted to free themselves most rapidly of foul-broody nymphs and larvæ; for this purpose they produce special substances for preventing the development of the bacillus and spores, and for keeping them in a latent condition.

We are encountering a new miracle of the apiary. The keeping of the bacillus from further doing harm; in other words, the disinfection of their homes is executed by the bees themselves by application of substances, which the human intellect first discovered after many years of research, and which, at present, are accepted as the most effective disinfectants for our homes.

First. The secretion of the salivary glands and the food-chyle of the bees contain abundant vinous acid, which is analogous with the acid in grapes and wine.

Second. A long time after the newly-hatched bee has left the cell the brood-cells still produce gaseous formic acid.

Third. The larvæ contain plenty of concentrated formic acid, which is a free acid from the vinous acid of the food-chyle oxidation.

Fourth. The ethereal oils, which the bees gather with the nectar and pollen, serve as disinfectants, and act as a stimulant or spice for their food.

Phil. Reidenbach claims, that on chemical analysis of thymolatic Ajowan oil he found it to be a first-class stimulant and antiseptic, nearly as effective as sublimate. This, Dr. Lambotte endorses emphatically, saying that he arrived at the same results by microscopic investigations; that the larvæ contain substances of an antiseptic nature which prevent the development of bacillus, for which reason bacteria may appear in healthy larvæ. The transsubstantiation in the bees and larvæ, the formation of formic acid from vinous acid of the food-chyle by means of oxydation is of great value for keeping foul brood out of the colony. If the bees are to be energetic and ambitious, so that they clean up their brood-frames and carry out all their dead larvæ and nymphs; if they are to produce antiseptic substances in abundance, and if they shall be healthy and resistible against foul brood, the following conditions must be complied with under all circumstances:

1st. A good ventilation of the hives.
2d. Good food, honey and pollen.
3rd. A normal queen which produces strong, healthy population.

The results of poor ventilation of the hives are known: In winter a wet colony, moldy combs which are unable to produce formic acid, scarcity of air, increased wants for food, rearing brood in unreasonable season, scarcity of water, dysentery, chilled brood, foul brood. In summer, overheating, dullness, poor quality and scarcity of food, dying of the brood, and again foul brood.

Experience teaches us that foul brood is easily produced in those colonies where there is poor ventilation. Honey is the only food for bees; sugar, containing hardly any albumen, will not have the desired effect. Whoever had the opportunity to see how bees prefer honey when sugar is set next to it; whoever has not observed that in spring the colonies fed in winter with honey are in advance of those reared on sugar, will have to learn from physiology that the development of all animals and formation of nitrogenous organic substances depends upon the albumen in the food; hence the energetic active spirit of the bees depends upon their food. This shows that the bees need honey and pollen in order to be able to take up the fight against foul brood. What has a colony of bees got to nourish its brood in the spring, with a solution of sugar which contains scarcely any albumen? Nothing, not even what they need to keep up the energetic spirit to throw out the dead larvæ and nymphs. How valuable the albumen is in the food we can readily observe in the wild animals. Without albumen where would their energetic spirit be? A foul-brood colony never shows life. Pollen is the food for bees, which contains the most albumen. What pollen amounts to we can learn from the Heide bee-keepers. Mr. Lehrzen, of Lueneburg, writes: The bee-keepers claim that if the bees are left in one place for three years they will be infected with foul brood, caused, as the bee-keepers claim, by lack of pollen until late in the season. This also shows that the originator of foul brood must be widely diffused, for if foul brood appears in consequence of missing pollen, the foul-brood bacteria must be very plentiful. When pollen is missing the bees will keep themselves for some time, as the honey contains about from 1 to 3 percent of albumen, the most of this in digested form called peptone, which does not melt on cooking. The presence of peptone in honey I have found on analysis. Out of the salivary glands, the peptone is more or less transformed into a sugar solution, but in quantities too small. Often the queen is at fault that the colony becomes sick, if she produces more or less degenerated bees. Degeneration shows itself on the creatures by organic defects, insufficient development, small resistibility against contagious diseases, short life, especially by laziness and lack of energy. The degeneration is a consequence of abnormal conditions, especially copulation of near relation. Look for good ventilation, good food for fresh blood and for queens not related to your stock.

Other precautions for the prevention of the malady which, however, are of secondary importance, must be taken into consideration. Under all circumstances keep away contagious combs and honey as much as possible. When buying honey for feeding, we should be very careful to place no foul brood combs into healthy colonies; watch the brood-cells at all times, in order to detect the presence of the disease in the beginning. Disinfect all used hives, which come from other apiaries, fumigate them with formalin. All bacilli and spores are positively killed by the formaldehyde fumes under the following conditions: They must be so exposed that the fumes can come in contact with them; they may only be covered with thin materials, for instance, paper, one cubimeter of air must at least contain eight grains of formaldehyde; the air of the respective department must be very moist and warm, and the fumigation must be continued for at least seven hours.

Formaldehyde is highly recommended, because it leaves no odor or residue in the hives or combs. For fumigation, pastilles in a retort may be used, the fumes out of the retort to be led into the hive, into which a vessel with boiling water had been previously placed. After ten hours all foul brood, bacilli and spores will be dead. Or, the lamp, which I described about a year ago, may be used.

A 40 percent solution of formaldehyde is called formalin. One pastille produces one grain formaldehyde. First, it acts as formaldehyde, then as formic acid into which it was transformed by oxidation. $C\ H_2O$ (formaldehyde plus $_2O$ oxygen)=C H O formic acid). Formaldehyde readily oxydizes into formic acid in the air. It is not impossible that the escaping formic acid, which is generated in the brood-cells, originates from formaldehyde.

Is it not interesting to know that science has found the way of Nature, and that the antiseptics we now use and which are acknowledged to be the best are the same which Nature has forever used in the bee-hive? We no longer place all our hopes upon the application of one remedy, but rather upon the colony itself, upon the conditions prevailing in the hives, upon the conditions of the colony, so that it is able to produce the substance which is needed for the prevention of evil, upon the energetic spirit which will make the bees throw out the dead larvæ and nymphs.

The strength of the colony which has to be treated must be taken into consideration. When the disease is noticed in a weak colony, I would not try to cure it, but would unite it with another one of the same condition, as the value of time thus employed would repay the trouble. The sickness passes through various stages. We may therefore make two divisions, calling the one the first or harmless stage, and when it is further advanced, the second or dangerous stage. A strong colony throws out the nymphs and larvæ when dead at once, and can not become foul-broody.

If the colony suffers, however, under the depression of unhealthy conditions by not having enough supply of healthy food, or from exposure to the cold, or from overheating, then we notice dullness and laziness on the part of the bees, and they no longer throw the dead larvæ and nymphs out of the cells. These suffering bees may make an attempt to do so, or may gnaw at the dead larvæ and nymphs, removing the cappings of the cell in which they had died two days after being capped. In such combs, we see uncapped cells among the perfectly capped brood. These uncapped cells contain white and brownish nymphs which died two days after being capped. This can be seen plainly on the pointed head. Such a colony, which has uncapped foul-brood cells, suffers from the harmless stage. If the bees notice the foul brood, they gnaw the larvæ, nymphs and cappings, but cannot resolve to clean the cells. If, however, better weather and food sets in, they often awake to new life; they clean the cells, and by so doing destroy the harmless foul brood. The same result may also be obtained by artificial means. If such a colony, where there is no flow of honey, be daily supplied with prepared honey-pollen, at the same time placing a piece of blotting paper on which from 40 to 50 drops of Ajowan oil, rosemary oil, melissen oil, or anise oil had been poured on the bottom-board of the hive, you will be astonished at the stimulating effect the oil will have upon the colony; how it will bring out new life, and how the colony will recommence to clean up and cast out the dead larvæ and nymphs. It occurs that a colony becomes affected with the harmless foul brood, and is again cured without the owner noticing it.

On longer duration of the disease it becomes more and more contagious, the number of dead larvæ and nymphs grow together with the depression of the colony. The bees no longer uncap the cells, but leave the most untouched; they bite a small hole in the capping, and then the dead nymphs begin to putrefy and transform into the well known bad-smelling brood-mass. This is the dangerous stage of foul brood. It now declines from step to step. But even this dangerous stage is not always so bad but that the colony may become re-encouraged if fed for some time or treated with the above-mentioned remedy. There are several cases known where affected colonies were cured by a honey-flow. In such cases in which the colony was treated with stimulating food and etheric oil without the desired effects having been obtained, a better queen must be substituted for the old one. Disinfecting and changing the hives is only necessary when the malady has developed to a high degree.

Whosoever treats his colony carefully, and takes care that his colonies are supplied with good and plentiful food, fresh blood, good ventilation, and good queens, will be safe from the bad or dangerous stage of foul brood. If foul brood ever appears, the careful bee-keeper will surely cure it in the described manner; he will constantly watch the brood, and if he notices any gnawed cells he will attend to them at once, so that the evil does not gain the upper stage. Last summer, after the honey-flow was over, I had the opportunity to witness a party using the McEvoy treatment. For awhile we thought it had cured, but after some time the sickness reappeared, although the treatment had been carefully performed. But, as only sugar syrup was fed, the energetic, active, ambitious spirit of the bees was missing. This I also noticed when formaldehyde fumigation was used exclusively. This leads me to the conclusion that if healthy honey and pollen in oils had been used the cure would have been perfect. There always will be bee-keepers who will not take proper care of their bees. For such, a foul brood law compelling them to disinfect hives and colonies is necessary.

The prevention of disease and the natural care of colonies are the main thing, but not the destruction and the curing of the malady. The enemy is only to be kept out of the apiary by natural ways. Keep them so that when spring reappears and revives all Nature, your bees awake from their slumbers strong and healthy, not weak, perhaps so weak they are beyond recovery.

Hamilton Co., Ohio.

Convention Proceedings

THE COLORADO CONVENTION.

Report of the Proceedings of the Colorado State Bee-Keepers' Convention, Held in Denver, Nov. 23, 24, and 25, 1903.

BY H. C. MOREHOUSE, SEC.

(Continued from page 121.)

THIRD DAY.

The morning of this day had been appointed to visit the foundation factory of H. F. Hagen, and see it in operation. Three bee-keepers were somewhat earlier than the rest in arriving, and witnessed the process of sheeting by the Weed sheeting machine, which rolls out a continuous plain sheet of wax, about an eighth of an inch thick, from a receptacle of melted wax. Unfortunately the machine balked before the rest of the convention arrived, but the latter viewed the milling operation on another machine, and with the various automatic devices for expediting the work and making it exact. Mr. Hagen explained that the new machinery required some little time to be "broken in" before it would run uninterruptedly. The factory seemed to be well equipped for turning out a large quantity and good quality of foundation.

The president of the Denver Chamber of Commerce then addressed the convention somewhat as follows:

The time has arrived when the welfare of the community can not be attained without the associating together of individuals. The Chamber of Commerce has 600 members, who are associated not for making money for themselves, but for increasing the welfare of the city of Denver, and they naturally also increase the welfare of the State and of their own pockets in attaining that object. The bee-keeping industry of the State, he is told, amounts to many hundreds of thousands of dollars, and adds to the wealth of the community. The output of the cultivated soil of the State is greater than the output of the mines; and were it not for the farmers there could be no rearing of bees. As representative of Denver, he welcomed the convention to the city, hoped its labors would bear fruit, and stated that whatever the Chamber of Commerce could do, it would be only too happy to do if the convention would give suggestions.

Secretary Williams, of the Chamber of Commerce, talked of some of the work of the Chamber, especially the Live Stock Show, of the early arrival of bees in the State, and offered the use of the dining-room and the reading-room to the bee-keepers during the convention.

PRODUCING FANCY COMB HONEY.

A paper by W. W. Whipple, on "How to Produce Fancy Comb Honey," was read, but the Secretary did not get a copy of it.

Mr. Morehouse—When putting the section super between the parts of the Heddon hive, have you no trouble with queens?

Mr. Whipple—None whatever.

Mr. Gill—I am satisfied with our grades. We should aim to produce as little No. 2 as possible, and turn our attention to those two grades.

Mr. Whipple—It is a question of the Eastern markets. I am in favor of a fancy white grade.

Mr. Pease—We have lost on our honey by not having a fancy white grade.

Mr. Gill—We have such honey.

Mr. Pease—But we don't get paid for it.

Mr. Whipple—I am in favor of selling our honey by weight. This year my honey averaged 26 pounds to the case.

Mr. Jouno—I am like Mr. Whipple, in favor of selling honey by the pound. If our honey is a little light the consumer comes back on us.

Mr. Whipple—The honest way is to sell honey by the pound. Eggs, too.

Mr. Spencer—If we had grading rules so as to make fancy honey, wouldn't it be an incentive for all bee-keepers to try to produce fancy honey?

Mr. Whipple—One year I had a ton of No. 2 honey.

Mr. Porter—It would merely complicate matters to have a fancy grade. If you have fancy, somebody else will have extra fancy. In our rules, No. 1 designates the highest. It expresses a good deal. If a man produces nearly all No. 1 he is doing well. When it comes to sending telegrams and writing correspondence about a fancy grade in addition to the others, it is too much.

Mr. Whipple—The great reason for a fancy grade is, that it is in all the other markets.

Mr. Porter—In selling anything it has always been my rule to let the other fellow make a little money. I am satisfied to have our No. 1 sold as fancy in the East.

Mr. Jouno—I am with Mr. Porter on that question. We ought to have more honey in No. 3.

Mr. Whipple—If there were a grade of fancy white, I should try to have some. I am in favor of changing the grading rules, and also changing them to sell honey by the pound.

Mr. Booth—The trouble in selling honey by the pound is that if the sections overrun, the retailer will never get anything for that. He would only get as much for 1¼ pounds in a section as for ¾ of a pound.

Mr. Spencer—Will not some object to over-weight honey?

Mr. Porter—They do not object to it when they are buying by the case.

Mr. Gill—Our honey is full weight according to the grading rules. Like the foul-brood law, our rules are not perfect; but if they were changed they would be no better. The double-tier case was not wanted by the trade three years ago, and now it is wanted.

Mr. Porter—Nothing is more important than this. In a sense we do sell by weight. We all have our grading rules, and our honey is guaranteed to come up to our grading rules. In some localities, to be sure, it is hard to come up to them, because in those localities it is hard to get the honey filled out.

Mr. Aikin—Mr. Porter's reminder is to the point. In fact, we are selling by weight. Our rules give a little leeway. Suppose we do change to sell by weight. How long will it be before the different buyers squeeze us down? They will buy by weight and sell by the piece to increase their profits. Whenever we say to the buyer that we guarantee certain weights, he is safe, and we are safe.

Mr. Whipple—They are not satisfied with that. Another point: If they buy by the pound they can figure it up. Say we ship a car-load, and Mr. Aikin brings in full weight, say 22 or 23 pound cases net, and another man puts in 20-pound cases. Mr. Aikin's honey brings up the other to be No. 1, and Mr. Aikin doesn't get enough for his honey.

Mr. Aikin—If I can sell by the pound, and get just as much as anybody, I will leave separators out and stretch the sections, and get more honey in each section. But where will that lead to? We will get into hot water a whole lot quicker. With one-pound sections of honey, if they are produced as they ought to be, we do not get 24 or 25 pound net weight per case except in very rare cases, but, as a whole, they run from 20 to 23 pounds to the case. The rules limit us simply to protect us from 18 and 19 pound honey. They don't lead us to produce crooked and ungainly honey. To illustrate: A Fort Collins grocer said to me he had gotten some honey that weighed 26 pounds net to the case. I told him that could not be separatored honey, and as a matter of fact you could not slip out half a dozen sections from a case without damaging the honey.

AFTERNOON SESSION.

Mr. Richards spoke a few minutes as a representative of the horticulturists, calling attention to the independent existence and distinction between the State Board of Horticulture and the Colorado State Horticultural Society, with both of which he is connected, and inviting the Association to appoint delegates to take part in the coming annual convention of the Colorado State Horticultural Society, and contribute a paper, for which he suggested a business subject as likely to profit both bee-keepers and horticulturists. He emphasized the necessity of sticking to one's organization, and declared that when it comes to the disposing of produce, no people on earth were quite so weak as the horticulturists. If there were anything to be found fault with they would kick and grumble, but would not go after the man and see to it that matters were righted. He illustrated the point by the story of the negro, who, as Thanksgiving time approached, prayed often and earnestly for a turkey, but without avail. As a last resort he prayed, "Oh, Lawd, send dis nigger after dat turkey." He got it.

MANUFACTURING BEE-SUPPLIES IN COLORADO.

"Can not something be done at this meeting in regard to manufacturing supplies in Colorado?"

Pres. Harris—We can not go hastily. We need a good business committee to investigate the prices of machinery, and report at another convention.

Mr. Morehouse—I don't think this Association is ready now to take up this question. Each one would have to chip in more than a little. At the present time it is better for each one to make his own hives.

F. Rauchfuss—It is quite a difficult thing in the present situation. But we might do the same as the Longmont people. All these supply orders would have to be filled early. I move a committee be appointed to take the matter under advisement, for this State and other States.

Pres. Harris—The chair would like to defer the appointment of the committee.

Mr. Morehouse—I would suggest that perhaps the Colorado Honey-Producers' Association could get such hives made in Denver.

Mr. Frank Rauchfuss then read a paper on,

THE IMPORTANCE OF PROPER GRADING OF COMB AND EXTRACTED HONEY.

As Colorado is now one of the States foremost in the production of choice white comb honey, which is shipped in car-load lots to nearly all parts of the Eastern States, it behooves every bee-keeper to give due consideration to the question of carefully grading and packing of his crop of comb honey.

As long as most of the honey produced was needed for home consumption, this question of grading and packing was not such an important one as it is now, when most of the honey produced has to be shipped out of the State, and comes in competition with the honey produced in other localities.

The grading rules adopted by the Colorado State Bee-Keepers' Association, some years ago, have borne some good results, as now about 90 percent of the bee-keepers of northern Colorado are using a uniform size of sections (the 4¼x4¼x1⅞) and a uniform style of shipping-cases (the 24-pound double-tier cases with glass fronts), and the most of them are grading their honey according to Association rules. As a consequence, the product of northern Colorado now has a good reputation among the honey-buyers of the East, which is evidenced by their readiness to buy from this section in preference to looking for their supply elsewhere; because they are assured of reasonably uniform grading, and of having the honey put up in a case that will suit their trade, as it is neat and showy, and withal the best suited for reshipping in small lots.

When it comes to the making up of car-load lots then the question of having uniform cases to handle is a vital one, as it is quite difficult to make a satistactory job in loading when various sizes and styles of cases have to be dealt with.

Right here I wish to say that it is about time for the large supply manufacturers of the United States to come to some agreement in adopting a *standard* for the outside dimensions of the various styles of shipping-cases used. At present there is just enough difference in height and length so that cases of the various makes will not pile up satisfactorily.

While speaking about cases, I wish to say a word about the nailing of them. During the past season the writer has seen the contents of two cases drop on the sidewalk, owing to the insufficient nailing of the bottoms. The cases should be well nailed all over, the glass secured to keep it from sliding out, and the cover nailed on with cement-coated nails. The smooth nails furnished by some manufacturers for the nailing of the covers are too small to keep from working out in hauling. The paper in the bottom of the case should be neatly folded so as to form a tray, and the drip-sticks in the bottom secured from sliding about by daubing a little honey on their lower sides, or tacking them fast with small tacks, which, however, should not be so long as to stick through the bottom of the cases, as some grocer may be tempted to use strong language for having his counter scratched up. In double-tier cases it is well to have a manilla paper between the upper and lower tier of sections; there should also be a paper beneath the cover to keep out dust. This paper, however, should not be any larger than the case itself, and not protrude beyond the edges of the cover.

GRADING COMB HONEY.

Now, to come to grading of the honey. In removing the honey from the hives an undue amount of smoke should not be used, as it is liable to give the honey a smoky smell; nor should the bees be permitted to bite holes in the cappings, as this disqualifies it for the first grade.

The honey should be graded in a room that is perfectly bee-tight, and is well supplied with windows. Honey can only be properly graded when a good supply of daylight is available; lamplight, gas or electric light is not suitable, as it will not give the true colors.

Some bee-keepers are in the habit of having a shipping-case before them for each grade of honey, and after scraping the propolis from the sections, they put the honey in the case of the grade to which it belongs. I have tried this plan, but it has not proven satisfactory to me, and I now scrape about 20 supers of honey, and when I commence doing this I start three piles, for No. 1, No. 2, and cull. After I have that number of supers emptied, I commence to case, and find that by having such a large number of sections to select from I have a better opportunity to get honey of the same shade of color and finish in the same case.

In regard to the facing of the cases, I take the stand that the face should represent the contents of the case, and should not be better than the honey that is back of it; however, I do not believe in going to the other extreme of dropping the honey indiscriminately into the cases. Care should be taken that the facing shows honey of the same shade or color, and represents as neat an appearance as the contents of the case will allow.

Regarding color of honey and cappings, and also the weights of the various grades, our Colorado rules are sufficiently explicit to answer all purposes, although there seems to be some bee-keepers afflicted with color blindness, to judge from the color of the honey which they are trying to sell as No. 1 grade.

It is well to have scales handy while grading honey, so as to make sure that it will come up to the required weight.

Now, there is one rule that no one should lose sight of while grading comb honey, and that is this: *Try to put yourself in the place of the buyer, and whenever you are undecided whether a certain section should go into the first or second grade, ask yourself the question, "Would I be willing to buy this for No. 1 myself?"* If you continue to follow this rule you will have no trouble about the grading of your comb honey.

GRADING EXTRACTED HONEY.

Any one who wishes to produce extracted honey suitable for table purposes, should bear in mind the following points:

He must be in a locality that will furnish a white or very light amber honey. Given such a location, he should have the proper facilities in the way of suitable buildings, extractor, tanks, and a large supply of extracting-combs, so as to be able to produce a strictly first-class article of thoroughly ripened honey.

It has been my experience that the finest honey put on the market in this State is produced by those bee-keepers that allow their extracting supers to remain on the hives for several weeks after the bees have filled and sealed them; this honey has a smoothness and flavor about it that is lacking in honey which has been extracted before it has been thoroughly ripened in the hives.

Under certain climatic conditions even honey that has been extracted when the combs are three-fourths capped over is liable to ferment. When the writer was in Chicago he saw a large lot of extracted honey which was produced in one of our neighboring States; this had been rejected by the buyer because part of it had started to ferment. Fermentation destroys the entire flavor of the honey, and makes it unfit for anything except vinegar-making. I, therefore, wish to caution our Colorado bee-keepers to be sure not to extract any honey before it is thoroughly ripened.

After extracting, all honey should be carefully strained. A strainer made of double thickness of cheese-cloth answers very well for this purpose. As there is always a slight variation in the color of each lot of honey that is extracted, it is well to mark the cans that contain the honey of the same extracting alike, and then give each subsequent lot a different marking. Then, when it comes to the marketing of the honey, it is easy to take a correct sample of each lot.

Now, in conclusion, let me say that the State of Colorado has the reputation of producing the finest honey in the United States, and it behooves every bee-keeper to see that this high reputation of our honey is not injured by careless grading and packing. FRANK RAUCHFUSS.

Mr. Morehouse—If we expect to maintain our reputation we must grade with scrupulous care. One reason that accounts for the low price of extracted honey at the present time is the unripeness of some of it, which is fit only for manufacturing purposes. Proper production would not only increase the consumption, but also advance the price.

F. Rauchfuss then exhibited a case of comb honey that had been sent to the Colorado Honey-Producers' Association as No. 1 honey. It contained a few No. 1 sections, a number that were No. 2, both as to appearance and weight, and several that were much inferior to the No. 2 standard, all mixed up in the same case.

Mr. Morehouse—In the exhibiting case at the State Capitol, cull honey has been substituted for the No. 1 honey that was there.

F. Rauchfuss—I move the Committee on Exhibits be instructed to investigate and see how this came about; to see who is responsible for our being treated in such a rotten manner.

Pres. Harris—This shows that there is "a nigger in the woodpile." We should find out the cause and publish it to the world.

A committee was appointed, consisting of J. U. Harris, W. L. Porter, and H. Rauchfuss.

Mr. Gill—The committee sent to Mr. Milleson present the following report:

Resolved, That, whereas, our aged brother and former president, and a beloved member of this organization, has recently met with a serious and painful accident, causing him much suffering, and preventing his attendance at this meeting; therefore,

We hereby extend to Bro. E. Milleson our heartfelt sympathy and good-will.

Resolved, That a copy of this resolution be incorporated in our minutes, and that a copy of same be delivered to Mr. Milleson.

M. A. GILL, Chm., R. C. AIKIN, }
MRS. M. A. BOOTH, R. H. RHODES, } *Com.*

Adopted by a rising vote.

(Continued next week.)

CHICAGO-NORTHWESTERN.

Report of the Chicago-Northwestern Bee-Keepers' Convention, Held in Chicago, Dec. 2 and 3, 1903.

(Continued from page 68.)

ELECTION OF OFFICERS.

The annual election of officers was held at this stage in the proceedings, with the following result: President, George W. York; Vice-President, Mrs. N. L. Stow; and Secretary-Treasurer, Herman F. Moore, of Park Ridge, Ill.

MOST PROFITABLE STYLE OF SECTIONS.

"Which are the most profitable sections for the producer, the beeway or the plain?"

Pres. York—How many think the beeway sections are the most profitable? Eight.

Pres. York—How many think the plain sections? Seventeen.

Pres. York—How many have tried both? Nineteen.

Pres. York—How many think it doesn't make any difference whether plain or beeway? Three.

Pres. York—How many don't know? Eight.

PRESENCE OF DRONES AND SWARMING.

"Does the presence of a large number of drones tend to intensify the swarming tendency or impulse?"

Pres. York—How many think it does? Six.

Pres. York—How many think the drones don't make any difference as to the swarming tendency? One.

Mr. Wilcox—How many think the swarming propensity tends to increase the number of drones? [Sixteen.]

Mr. Whitney—I asked that question. On examining my bee-hives I found a large number of drone-combs. I never had so much swarming in my life among my bees. I had 31 colonies to start the season with and I had 54 swarms. I thought I knew how to keep down swarms. I increased, gave them plenty of room, cut out queen-cells and did everything I could do, and yet they swarmed, and I never saw so many drones as I had.

Mr. Moore—I would like to ask in this connection, when you control the production of drones by workers, can you thereby solve the swarming question?

Dr. Miller—No, you can't do it; and I would like to say to Mr. Whitney that he will find that there will be years when he will have exactly the same amount of drone-comb in his hives, and possibly with the same amount of drones, and he will have swarming more than other years. With quite a number the last season was an unusual one for swarming. It has been one of the worst years for swarming that I ever knew. I know I spoke of it more than once. There seemed to be a scarcity of drones, the smallest number of drones I ever had was this year, yet I think it was about the worst year for swarming. The two things don't always bear the same ratio. Mr. Hutchinson says that if it wasn't for the swarming you wouldn't have any drones. The two things are not always in proportion.

Mr. Starkey—I noted that drones would tend to increase swarming, but by doing so I meant this: That instead of drones, if the same amount of labor had been expended in producing workers we would still have had the same amount of swarming tendency. I don't believe that the presence of drones would increase it any more than the workers themselves. However, I believe that it would be an advantage to the colony in point of the value to the honey-producer if these drones had been prevented.

Dr. Miller—If you suffer a large number of drones in your apiary you will have more swarming, and I believe if you allow a large amount of drone-comb in your hives you will have more swarming for it. One of the means to help cut down swarming is to allow as little drone-comb as possible to remain in the hives.

Mr. Longsdon—You may put a drone-comb into a very small colony, but the colony that doesn't show any tendency at the time of swarming, and immediately, almost, if other conditions are favorable, that colony will swarm. I know it is the change of the drone-combs that does it. I believe the drones have a very great amount to do as regards the swarming of bees.

Mr. Whitney—I attempted to prevent swarming by cutting queen-cells. I had a hive-box that I would put the queen in, and turn it in front of the hive so the swarm couldn't get back, and they would all cluster in that box, and I cut the queen-cells out. They would work for some time; perhaps put in a case or two of honey and then swarm. I had one swarm come out with 200 or 300 bees, and I made them a hive and they are a good colony of bees today; but there was only about 200 or 300 bees in the whole swarm, so you see what I produced with the queen. She gathered 200 or 300 bees and they swarmed out in a cracker-box. I merely mention that as the tendency of swarming in my yard, as one bee against four.

Dr. Miller—A single bee never swarms.

Mr. York—That's so; I believe they have to get married first!

Mr. Duby—I don't believe a large or small number of drones has anything to do with it. I have had colonies that swarmed three times, and they had but very few drones, and I have seen lots of drones and have had no swarming.

Mr. Hutchinson—Mr. Aspinwall is now working with a non-swarming hive. I believe he spent $1,000 in making wooden combs and his idea was that the bees wouldn't rear drones, and he was going to get rid of swarming that way, but the bees swarmed just the same with those wooden combs.

METHODS OF WIRING BROOD-FRAMES.

"Why are brood-frames wired horizontally and not vertically?"

Mr. Hutchinson—I have seen a great many that were vertical.

Mr. Baldridge—I wire all of mine vertically. I never had a pupil that went to the horizontal wiring.

Dr. Miller—I have had lots of them wired both ways. One reason for the horizontal wiring is, it doesn't make any difference with the strength of the top or bottom bar. A good many have found by wiring vertically that there was a tendency to draw together. The horizontal wiring is not affected in that way. Mr. Hutchinson says put in an upright stick to hold that. Yes, some have used that and some have used a piece of tin, but that's so much more machinery. For myself, I prefer to put in several little sticks.

Mr. Baldridge—The reason, perhaps, that I wire up and down is because I commenced that way, and I found it a very good way. I don't have to have a saw-kerf. The top-bar is 5-8 thick, and the bottom-bar is 3-8 and I use only six bars in a frame. I don't fasten my foundation at the top at all. It is not necessary to fasten it at the top, and it is not necessary to have a saw-kerf to insert, neither one, if it is wired properly, and I can use narrow strips. I use the standard shape of frame. I put all those strips on the perpendicular wire, and I use every particle, and when they are done you can not tell that they are made of strips. You can use a half inch or an inch strip that way.

Mr. Whitney—Do you split those strips?

Mr. Baldridge—No, they are all woven together, and just as nice combs as though of solid foundation.

MATING OF A SUPERSEDED QUEEN.

"If a queen is superseded in the fall and not fertilized then, will she be fertilized the next spring?

Mr. Hutchinson—I don't know.

Mr. Moore—She may be sometimes.

Dr. Miller—The Atchleys reported a number of cases in which the young queen superseded in the fall laid in the spring, but I think they claimed the queen would be fertilized in the fall and didn't lay until the spring. For myself, I wouldn't give very much for the chances of a queen being a good queen if she didn't lay in the fall.

Mr. Abbott—The probabilities are she will not be a good queen. If she is superseded she will not be. She will be dead.

SOUR HONEY IN THE BROOD-CHAMBER.

"Can the case of sour honey in the brood-chamber be explained? That is, where honey sours in the brood-chamber?"

Mr. Wilcox—I think it can be explained, but I don't see how it can be helped. I have seen sour honey because it was gathered from something that was sour before it was gathered, and also because it absorbed so much moisture from the temperature. It was a very weak colony, and it got just warm enough so fermentation would commence; but the main cause is where it is gathered from some sour substance.

PRICES OF EXTRACTED AND COMB HONEY.

"What price must extracted honey be sold for to make the average colony as profitable as it would be if run for comb honey which sells for 15 cents per pound?

Mr. Baldridge—That depends upon whether you are going to wholesale or retail it. No man has any right to sell extracted honey for any less than comb honey at retail. I charge the same price and I give my customers their choice, and my books will show that 90 pounds in 100 are extracted. What is the use of giving your honey away? I was in existence as a bee-keeper before extracted honey was brought about. Nobody would ever have asked bee-keepers to have done it if they hadn't done it themselves.

Dr. Miller—Mr. President, Mr. Baldridge isn't answering the question at all.

Mr. Baldridge—Fifteen cents.

Mr. Wilcox—That is a subject that I commenced studying a good many years ago, and I thought that I could find it by referring to the back numbers of the American Bee Journal, and I spent a week at it, and now I am obliged to guess at it, that about two pounds of extracted to one of comb is an equal matter with the average. Of course, conditions vary one season with another, and one locality with another, and there are several circumstances to be taken into consideration. It is a very practical question, and a very important one for beginners. I wish to get at the facts. I produced comb honey for ten years exclusively, and I was satisfied then that that it was the most profitable, and I changed finally to extracted because my locality produced principally dark honey, and I am sure it is more profitable than the comb. I tried again to produce the comb honey but I can't produce it now as well as I could 30 or 40 years ago. I believe I have lost the art. I think when you take into consideration the losses, and risks, and breakage, that it is about a fair and equal thing to us, and that the price of comb honey should be just double the price of extracted. That's my rule.

Mr. Horstmann—If you sell comb honey at 15 cents a pound I think extracted ought to be sold for 10 cents. I have produced both comb and extracted and I watched it very closely. I produce more extracted than comb. I get 15 cents for extracted honey and 20 cents a section for the comb honey, and I am satisfied that the extracted honey at 15 cents a pound pays a good deal better than the comb honey at 20 cents a section. There is no section to buy, no foundation to buy, and after we have our frames in shape we can use them over and over again, and there is less labor and it is a great deal less expensive. The first cost is the principal cost, and I believe about 10 cents a pound would make a fair price for extracted, while comb sells for 15.

Dr. Miller—That's one of the questions that's perennial. It began shortly after the extractor began, and it will be a question for every beginner when you and I are dead. Mr. Wilcox stated the full case when he said circumstances vary. One man says it ought to be the same price. Every locality is different. In many cases they ought to be just about the same price. In other cases about twice as much. There is a man sitting before me just now whose father years ago made fun of me because I would do anything at producing comb honey at all. I could do much better by producing comb. It wasn't difficult for me. What is true for this year may not be true for me ten years from now, and you will never get that question settled so that you will have one answer that applies all over.

Mr. Moore—It is so hard to cover the whole case rightly so that somebody won't be under a misapprehension. After selling honey 17 years it is my conviction that when you sell to the consumer you should sell comb and liquid honey at the same price. When selling to the wholesale trade it is a different case. You must get as much as you can. To us who are catering to the city trade it is an entirely different thing from those who are catering to the country trade. I have been told that I ought not to sell extracted as cheap as the comb. It is worth more to eat. As long as the trade is better satisfied to pay comb-honey price I say charge them the comb-honey price every time you sell to the consumer.

Mr. York—I was in the honey business long enough to know that honey is worth all you can get for it.

Mr. Niver—I wanted to know in a large apiary what was the relative proportion of comb honey and extracted honey that could be produced on the average, and how many colonies could the apiarist or operator handle well during the same year to make it the most profitable for his time to run for extracted or comb, provided comb was selling at 15 cents. What would be the market price for extracted honey to make it equally profitable? Of course, the sections, the foundation, the work, all put in, and the breakage, amounts to three cents per section on the average.

Dr. Miller—It is a little bit high.

Mr. Niver—I can take care of about three times as many bees for extraced as for comb honey during the season.

Dr. Miller—Do you mean taking in the expense?

Mr. Niver—Yes, sir.

Dr. Miller—It is hardly high enough then.

Mr. Niver—If I can get twice as much extracted from a colony as I can of comb, and take care of three times as many bees, I could sell the extracted honey at 5 cents, and make as much money at it as I could selling comb honey at 15 cents. That would be about my judgment.

Dr. Miller—There is that "if."

Mr. Moore—I want to call on a gentleman here to answer that question. He is very modest and seldom talks unless he is called on. What can the average bee-keeper do in producing comb and extraced honey? If he produces 1,000 pounds of extracted, how much comb can he produce? Mr. France, will you answer that?

Mr. France—That has been fairly well answered. Generally speaking, I find about two pounds of extracted to one of comb, taking it over Wisconsin. The amount of labor is less in producing extracted, and the labor and expense of producing comb are more.

Mr. Moore—Do you mean to say that Wisconsin produces twice as much extracted as comb? That isn't the point. The question is, If a man with 100 colonies can produce $1,000 worth of comb honey, how much extracted can he produce with the same colonies, the same year, in the same conditions?

Mr. France—About two to one. I think Mr. Wilcox one year set apart a portion of his yard and it went a little over three, did it not?

Mr. Wilcox—More than that.

Mr. France—I know that he was so converted to extracted honey that he has produced hardly anything else since.

Mr. Starkey—This question is raised. If an apiary has produced 1,000 pounds of comb honey in this locality I would rather think they could also gather 2,000 pounds of extracted honey; that this locality would be suitable for twice that number of bees if run for comb honey. I see in that a solution of over-crowded districts, where people running for extracted get 2,000 pounds of honey, twice the number of bees will certainly get the honey and store it in combs.

Mr. France—I was a little interested right along that line, so I took my home yard of 100 colonies half for comb and half for extracted, and kept a memorandum of it, but I wasn't satisfied with one year. That year it ran three to one in favor of the extracted. The next year it was two and one-tenth in favor of the extracted. It varies so with seasons. There are other reasons more than the pounds of honey. You must put in the additional labor and additional cost. It is the net profits you are after.

Mr. Wheeler—There is one point that has been overlooked, and that is the weight of the hive when the bees are ready for winter. I find if you produce comb honey you have a colony that's better prepared for the winter than when you produce the extracted.

Mr. Longsdon—I am somewhat of the opinion that we are exaggerating the amount of extracted honey that can be produced over the comb. I will have to quote that old saying, "In my locality." There were three or four bee-keepers out there, and they had had considerable discussion about this extracted and comb honey business, and one man was radical on the side of comb honey, and he didn't believe that they could produce so much extracted. One of them ran about 40 colonies for extracted and the other ran 40 for comb, and they came out very nearly even, and they gave both parts of the apiary the same kind of care. By the way, the one party who ran entirely for comb took more comb honey than any of the other parties did of extracted, and all in a circle of five miles, and the locality was very nearly the same. The one comb-honey man took and weighed it carefully, and I helped him weigh it. By the way, he produced it in two-pound sections, and he took 215 pounds of comb-honey to the colony in big hives, 35 of them. I agree, although he is perhaps a little too much on the other side, but I believe extracted ought to sell for very nearly the same amount as comb.

Mr. Wilcox—Supposing there were 225 pounds of comb honey to the colony, then we will agree that there should not be much difference in the price.

Mr. Horstmann—There is a great difference in localities, judging from the report of my own colonies this year. The best colony I had this year produced 139 pounds of comb honey. I had a double-hive colony which produced 163 pounds of comb honey. The best for extracted was 117½. Now, you see the comb honey is away ahead. It must be the locality; I don't know what else. I have never yet produced twice as much extracted honey from one colony as comb. There has been many a time that I have produced more extracted than comb, but very seldom.

Mr. Meredith—Perhaps it might be that the man that is running for comb honey might be able, with his manipulation, to produce more comb honey than extracted; but at the same time a man like Mr. France could double the amount of extracted over comb.

Mr. France—I would plead for the rest of the country not to be as my own State. Many of the bee-keepers in Wisconsin, when they have hold of the extractor handle they don't know when to stop. They extract too late.

Mr. Wilcox—There are some bee-keepers that can have all of the honey put into the supers so that the bees scarcely have any to go into winter quarters with. That's in the management.

Mr. Moore—There is a whole lot of this that enters into the comparative production of comb or extracted honey. The bees, of course, fill the comb all new. If you make them build the large frames out of which we take extracted honey of new—if, as in my brother's case, you have thousands or tens of thousands of empty combs which simply have to be filled with the liquid honey by the bees, you might get a great deal more extracted honey than comb honey.

Mr. Longsdon—The parties had the combs all stacked away—nice, clean combs, and the test was given fair and square in favor of the extracted business.

Dr. Miller—You may go over this ground for ten years and you will come out where you went in. There is the same man, and he says I got three times as much one year, and then he tried it again another year and he says it was a mistake, he got only two and one-tenth that year. If the same man in the same place finds that one year doesn't give him the same results as the other, you may change your man and change your place and you will have a different result again. When a young man comes to me and says, What shall I do? What is the ratio? The only answer is, Try it and see. You have to try it for your own place, and your own management, and you may thrash this over until after bedtime and you won't be any nearer to a solution.

Mr. Baldridge—Mr. France says he had three times as much one year and the next year two and one-tenth. Now, perhaps the third year with more experience he won't get that proportion.

Mr. France—I would say that these things vary according to the season and management, and we may thrash this over and over and you will find that that is the experience of every man.

Mr. Clarke—As regards the extracting yards, especially in Wisconsin, a few years ago we heard of a great loss of bees. Wasn't it a fact that 90 per cent of these losses came from where they extracted?

Mr. France—I would put it at that per cent. Quite a portion of them were. There were a great many places where the bees worked late in the fall, and there was something gathered from the marshes and it caused diarrhea, and the bees died.

Mr. Clarke—I think it was about five or six years ago. I know it was a general discussion that the extracted was paying down to the ordinary time, but that everything had fallen off, and that they had bees they couldn't and wouldn't feed. That is the year that we had low-priced honey, and it seemed the extracted part of it came mostly from the extracting yards.

Mr. France—It is largely so, and I was disappointed this year when I got back from the National Convention in going over the State. I put the question: "In what condition are your bees for winter?" And they said: "They are working nicely." I said: "Have you opened the hives really to know?" No, they had not, and to their surprise what they thought was wintering supplies had been used up. I can't account for it. If they own a horse or cow they will feed it up to go through winter, but they let their bees starve.

Mr. Abbott—Down in Missouri I can produce a little over twice as much extracted as comb. I buy it with my money!

RETURNING SWARMS AND CUTTING QUEEN-CELLS.

"In case the queen is taken from a swarm and the swarm returned to the parent colony, would the colony be likely to swarm soon again, providing all queen-cells but one are cut out?"

Mr. Hutchinson—No.

Mr. Whitney—I should say yes, because I had some colonies swarming three or four times.

Dr. Miller—Did you cut out all but one?

Mr. Whitney—I returned the queen, but cut out every queen-cell.

Dr. Miller—That wasn't the question.

Mr. Whitney—I have had that occur as stated in the question, but not frequently. It did occur.

Mr. Wilcox—I am inclined to think they would. If you cut out all but one they will build more queen-cells if conditions are favorable.

"SHOOK" SWARMING AND COMB HONEY.

"Can shook or artificial swarming be successfully carried on while producing comb honey in several out yards?"

Mr. Smith—You can successfully shake your swarms, but it will cut your honey crop short. You haven't the same amount of bees to work in the sections when you divide a colony.

Mr. York—According to Mr. Smith the "shook" swarming is successful whether the honey crop is or not!

REPORTING THE HONEY CROP.

"There is no honey exchange or 'trust' of bee-keepers to protect me on the *price* or *value* of my honey, then why should I give the amount of honey I produce to the public, for the benefit of the tradesman?"

Mr. Starkey—I would like to answer that by saying that he would be compelled to do it for lack of time to peddle it out himself. He can get his price for the honey if he will go to the consumers and give it to them in the quantity that they want, but that takes time and labor.

Mr. York—Why should he publish the total amount?

Dr. Miller—I think possibly the question may refer to this: It is a common thing each year for some of the large dealers to send out questions to those who produce honey in quantities, and find out how much honey they have. Asking them what is the crop in their region. Why should I give this advantage to these large buyers?

Mr. Starkey—He should do it only for ignorance of his own interest, because if he has a large crop—at least to give them this knowledge would have a tendency to lower the market price of this honey. If he informs the honey dealers that there is a large crop they will be less inclined to bid high. He would do it only through ignorance.

Mr. Whitney—This question brings to mind the report I saw from the Rockford convention in northern Illinois. That report gave information to dealers that the Northwest here was flooded with honey, and that it could be bought at 10 cents a pound without any trouble at all; that people were rushing about to give it away. It apparently came from the report of that convention. It occurred to me that bee-keepers were very unwise to publish the amount of honey they had; that they were too anxious to get rid of it. I havn't tried to dispose of any honey, yet I have sold it, nearly all. I wouldn't give a dealer a report of the amount of honey I had on hand if he should ask me.

Mr. Longsdon—Mr. Whitney is getting down to where the originator of that question wanted to get and he mentioned the Rockford convention. Prior to that convention, in our little town, surrounding us honey was selling cheap, selling for 10 cents a pound for comb honey, extracted for 8, and there was considerable of it being disposed of at those prices after that Rockford convention. They read those reports, and the little country papers copied them. I had parties come to me and tell me that we were robbing them, that honey ought to sell for 5 cents a pound; people went crazy over the low price of honey. Therefore that question was asked to get at whether or not we, as bee-keepers, are protected by some kind of a deal or trust—whether it wouldn't be just as advisable to keep to ourselves these tremendous amounts of honey which are generally multiplied by four or five, and be selfish for our own interests.

Mr. Wilcox—I was just going to remark that there are two sides to every question. I do when I am asked, and I am asked every year, and I am asking others every year. I want to know, and you want to know, everybody wants to know who has anything to do with it. I would much rather tell these men who ask, than to have them get the information from someone else. If the facts are to be published, I would rather give them the true ones, because I prefer to be a little careful about what the reports are, was my reason for not wanting that statement about getting 300 pounds of comb honey in a colony to be printed. There may be a possibility of that occasionally, and it would be cited and quoted and remembered as a common thing. I believe we should withhold such large statements, especially when talking before a reporter. Talk common, practical facts. We can tell the truth and still tell it so it will not become an exaggeration. I believe we should give these reports to everybody who wants them, and let them publish them if they wish. They will find out anyway before they will trade. I won't buy until I have some idea what the crop is. They must know, and will know, and I don't believe in trying to conceal it from them. I am in favor of making the reports myself, and having all the rest of the bee-keepers do it, but I want them to be careful and consider who they are talking to, and what the facts generally are. Not one particular colony or apiary, but the crop of the country, the district in which they are living. Have some regard for consequences.

Mr. Moore—There is no doubt at all in my mind but what the bee-keepers of our country are out tens of thousands of dollars each year by unwise actions. It is actually a case of self-preservation. This is a little off the question but it just shows how unwise we are. I will put it at 50 to 200 tons of comb honey was dumped on the Chicago market to be sold; that would have been enough for four to six months. In all my travels I never saw so much. I saw 25 or 35 cases of comb honey in one place, and the distribution seemed to be general all over Chicago. Some told me that they had paid 10 cents, 11 cents, 12 and 13 cents, and one firm with three or four stores were retailing their honey for 14 cents! The market was simply knocked all to pieces by this dumping of honey on the market, and people have been after me again and again. They know I have honey to sell and they say: "What are you asking? Not asking much are you?" I don't believe, far and wide, that we have an average crop. I really believe that there is not over an average crop, but by an unwise dumping on the market you are out two, three and four cents on the pound. The grocers said to me so and so out here had 10,000 pounds of honey, as much as to say that that was something. I say, keep those things in your own bosom. Other trades keep their business to themselves. Do a lot of thinking, and do very little talking. If they ask you what the crop is, say: "Well, about the same as last year, near as I can tell." Don't tell them that there is lots of honey, or I had 10,000 pounds, or my neighbor. "Be as wise as serpents and as harmless as doves," and everyone will gain.

Mr. Whitney—I believe as Dr. Miller does: I don't know.

Mr. York—Mr. Muth, what do you think about it?

Mr. Muth—I believe in honesty. I believe when we have a big crop of honey throughout the country, dealers should know it, because the law of supply and demand makes the price. Suppose we would buy a carload of comb honey at 16 cents, as it started off early this season, and we didn't sell that carload? (I am talking from my standpoint now). There is a concern in Nevada who a year ago sold us three or four carloads of honey. They start off and offered me a carload of honey this season at 16 cents delivered in Cincinnati. I told my book-keeper they will holler a little bit, and then they will come down to 15 cents. It was no more than two weeks until they came down to 15 cents. I says, "They are scared. There is honey coming in. They will sell for 10 cents before the season is over." I never even answered their letters. It came down to 13½. Two weeks ago they offered to deliver a carload of fancy white honey at my plant for 12½ cents. I told the young lady: "It will come down to 10 cents." It is the law of supply and demand that makes the market. If you are selfish it will burst. Here, on the other hand, you hold up your honey very high. It was only this morning that I sold 15 barrels of honey before I started; this was before nine o'clock, at a price that none of you folks would want to sell me your honey for. I have to go outside to buy this honey. I will duck under you and beat you every time. You hold up your end and I am glad of it. It is the law of supply and demand; it is finding its level. These people in the West who have big crops of honey, they will come down. If you want to select your price for honey get it out earlier. Honey that is produced in May—get it out. There is a demand early in June and July. If you wait until everybody wants money you are too late. If a dealer pays 16 cents and the next competitor buys it for 12½ cents, how long will a fellow last in business? I don't believe everything I read in the paper even if it is in the American Bee Journal. I have my own deduction of this. When there is a big crop you don't tell the truth, and a man who keeps the truth from the general public—well, I will tell you it is not right for the general public. It has made the demand for all the honey that's produced in this country; the individual bee-keeper, not at all. There are others. There are people in the West that don't know a queen from a drone that handle carloads. These fellows dig in; they sell honey. You don't care, you abuse the dealer. You have got the wrong fellow. You want to get at the National Bee-Keepers' Association to promulgate the uses of honey. There was one fellow in California, I believe, three years ago, who had an awful crop of prunes. They said prunes were scarce, and the wholesale grocer throughout the country knew better, and they simply kept the prunes. In San Francisco they had 500 cars of prunes to put in storage, and it wasn't any time before the association advertised throughout the State the good uses of prunes. The National Bee-Keepers' Association could do that and bring the price of honey away up. Any legitimate honey-dealer wants to pay the bee-keeper every dollar there is in it; he wants his shipments; he wants to make him happy. I think I have covered the ground now.

Dr. Miller—I want to emphasize that one point. We want the National Association to get so large and to have so much money that they can put a lot of money into advertising. I saw those advertisements and they didn't always appear in the form of advertisements. They made me think, "Why, I haven't been eating near prunes enough." That's what we need in all the prints. We want those dealers to tell the people the importance of eating honey. In regard to this telling what our crops are, you may talk if you please about keeping it quiet. If you are a born bee-keeper and you got a big crop of honey, you want to tell somebody. I can keep quiet and not tell, but I want to tell so badly that it wrenches me terribly!

Mr. Smith—Dr. Miller said he wasn't full of prunes then! In my correspondence with dealers I find they don't always tell the truth. They say honey is a drug on the market; it is worth 11 cents, choice snow-white is worth 12½ cents, and I have had individuals write me right from those places where those dealers are saying that they can't buy a pound of honey under 20 cents, and I have shipped honey in there at 18 cents a pound right under their noses.

Mr. Wheeler—I don't want any reflections on Mr. Muth. I send him lots of honey, and he always did the square thing, and hasn't crowded the price down, either. I find him a better man to deal with than some Chicago fellows.

Mr. Starkey—I am glad I said what I did, although the impression wasn't what I intended. I am glad Mr. Muth said what he did. He said something good for us. I am a little misunderstood by Mr. Muth in reference to my statement. The question was: Why should we tell the people? It wasn't my idea that we should keep the facts from the people who handle our honey, but the fact that there is an enormous crop I don't think should be spread broadcast. I don't believe in suppressing the truth, on general principles. There are such things, though, as discretion and honesty with silence. The best point and most important thing that has been said has come from Mr. Muth. We should increase the demand for honey. I had about 4,000 pounds of honey, and I could have rushed it into barrels down here, and I could have received probably 5 cents for it; and I got 15 and 12½ cents where a man took as much as a dollar's worth. That has been my price. I have probably got 200 pounds left. I didn't go around to sell it. If we are patient when we have honey we can say, "I will furnish you honey at a certain price," and then wait for them to come and buy that. You can get your price if it's right. I believe we ought to advertise, and the National Association is our only means. The National could spend quite a little money among the newspaper men, even in the Ladies' Home Journal and the Saturday Evening Post. I notice they are advertising a corn syrup. They spent lots of money on that, but no more than the National Bee-Keepers' Association could spend. I called them up by telephone and asked them to send me a sample, and it was clear and nice, and just as sweet and fine, and very much like the syrup produced back in the hills from cane, exactly like it, and it is sweet and has the same flavor. It is 10 cents for a pound and a half package.

It will no more take the place of honey than black molasses. We want to advertise, and we want to appoint some one in charge of that who can successfully advertise honey. Let the people know that honey is a good thing, and they will buy it.

Mr. Whitney—I tried to write this thing up a little once within the last year, but we get together in these conventions and we talk until the atmosphere is blue. We talk everywhere, but we don't publish in our local papers at all anything about the good honey would do people to eat it. If we advertised the good uses that honey could be put to, and stopped publishing so much in the bee-papers, we would get our price for our honey.

Mr. Muth—It may be a little off the subject, but to create a demand for honey might be a good point for the National, and I would vote for that. Last summer I conceived an idea of a showcase advertisement in a grocery like you see of Malta Vita and other farinaceous goods. I told them I would also put a swarm of bees in there, a one or three-frame nucleus. To start the goods I would stock the whole showcase with honey. I would get a lady demonstrator in your store, and every lady who comes in and who, you think, would be likely to buy a bottle of honey, you steer her over to the honey stand. I put in $800 worth of honey. I didn't tell the grocer to buy one dollar's worth. I thought it might pay me after it is all over for what we sold in the store. We had the finest show you ever saw. One of my traveling men was 100 miles from Cincinnati, and at the hotel at dinner (he was known at the table by the other travelers); he was asked if he had seen that honey display, and they just thought it was the finest thing on earth, and I could have a million dollars in displays in windows today, but it gets tiresome. In two weeks my young lady sold over $300 worth of honey in that store. I went one point further. I sometimes get a notion to travel. I have got to go, you just can't hold me down. I went East where they have a great department store which covers one block, and it is seven stories high. I said: "Let me see the manager." When we came up to the seventh floor there was an exhibition of everything that they had for sale. I thought, "Here is an opportunity to sell a barrel of honey; stacks of it." I showed them my bottled honey. If you please, there are other fellows in the East. My honey was the best honey in bottles put up. I am proud to say it. It is the truth. I told the manager that I would like to put up a demonstration for a couple of weeks or months. "I would just like to start you off here. I have the finest thing on earth." I sold him nearly $1,500 worth of bottled honey. Now, the National Bee-Keepers' Association doesn't do a thing like that. We are the dealers that get plugged in the eye every opportunity. Now, the Saturday before Easter, I went to see somebody in Chicago; I had promised to eat Easter Sunday dinner with my friend. I received a telegram which came from about 700 miles from home which read: "Give me the price on a carload of honey; also the price on less than car-lots." This was Saturday night and I knew by Monday morning I would be there. I turned to the telephone and asked my good wife to fix my grip, "instead of going to Chicago I will be gone about ten days." Monday morning I arrived and the fellow said: "I just wrote you the other day." I said, "Yes, but whenever you tell me to give you the price on a carload of honey I don't trust a letter, and I will go all the way across the country to see you." He says, "I am awfully sorry, because you came all the way here for that order, for I have prices that will knock you silly." Just right; I just imagined it. That's just the reason I wouldn't write a letter. To come right down to business, he said he would buy a carload of honey. I don't suppose you folks know I am not a millionaire, when it comes down to a carload of honey. Now, let me tell you while you folks are rated at $200,000, there are times when I draw a draft on you for $3,000 and it is returned. I said, "It would suit me much better if you give me an order for 15 barrels, to be delivered the first of the month, and 15 barrels to be delivered the 15th, and it will come right along; but I ask you just the minute your honey comes in the depot you fire the money in." He was surprised to see me so honest. I told him I needed the money. Of course, my bankers will advance more if I ask it, but I preferred to do that way. I knocked out adulterated honey, and he paid me ¾ of a cent more for pure honey than he would have paid for adulterated honey. He said, "Are there any more fellows in Cincinnati like you?" I told him, "Yes." I travel to sell that honey. You folks have more prestige. I would talk about the National Bee-Keepers' Association. Inspire everybody. If you did this you wouldn't be selling your comb honey for 10 and 12 cents, and your extracted for 5 cents. The demand would be greater than the product. It would be true, and the National Bee-Keepers' Association membership—you wouldn't have to advertise it the way you do to get your dollars. They would run for you. That would be the best thing. [Applause.]

Mr. France—I hate to take any time here as it might look, as I am in a position with the National Bee-Keepers' Association, that it would be better to keep still. There are two sides to all these things, and I admit that I have thought very many times of the discussions you had here years ago, and one that rang in my ears a year ago at the National convention, which means united efforts. There was a talk given here a year ago, that the best thing for the National Association to do was to use printers' ink. But a little while ago there was a paper in Sioux City, that published that comb honey was being produced and manufactured without bees. The writer said he knew for he had been in the business for years. He made statements that did thousands of dollars' worth of damage to the United States honey market. The editor refused to put in my reply. Within five days I had, through the Minneapolis Daily Journal, made my reply to it. It was the only one. I think that as soon as the members of the National get together more harmoniously, there is a great opening right along that line of advertising. We have the subject of adulteration to face, but with the vast amount of literature, and those of you who get my report may think I am exaggerating the amount of postage—I have circulated "Bee-keepers' Legal Rights," 4,000 of those have gone out. I also sent out copies of "Bees and Horticulture." We have been saved many conflicting lawsuits by the literature that has gone out, and I have air-castled that we would have another leaflet before 1904 was gone on, "Honey and Its Uses, and Conveniences."

FIRST DAY—EVENING SESSION.

The evening session was called to order by Pres. York, who introduced General Manager France. His subject was:

THE NATIONAL BEE-KEEPERS' ASSOCIATION.

I hardly know how to take up this subject, there is so much to it; it is so broad that my hands have been at the pen trying to answer correspondence and keep the machinery in order as best I could. There are so many sides to it; as I said, I hardly know how to take up the subject, and there are so many parts to it that I have not taken up this year for the lack of means and time. It takes a great deal of time; and, as I said this afternoon, you will find that my Annual Report will seemingly have consumed postage unnecessarily, but it has been in the distribution of literature, paying postage on that, and the correspondence to keep peace and harmony among our members and fellow men.

While we were on our Western trip attending the National Convention last August, we had opportunity to see—those who were favored by that trip—the effect of coöperation locally. We had had considerable correspondence in that line—articles written in our bee-papers. To see and investigate some of the workings of coöperation in California, Colorado and Utah was a part of my privilege while on that trip. I do hope the day is not far distant when we not only will boast of our numbers and the good we have done, but that the subjects of marketing honey, coöperation, furnishing supplies to the various members, and this other subject which we rather run to at length this afternoon, the subject of marketing honey—creating a demand for our product. There is in Colorado, a honey-producers' association, backed by its members with a guarantee. Any purchaser getting honey of that brand, with the stamp and seal of the Association, is guaranteed that it is pure, and that has created a surprising demand. I thought to myself, Could we have a stamp or a seal upon the honey of the members of the National Association that the world over would know there was no question about, what a door there would be open for us! I hope that day is not far off.

There are conditions that favor this coöperation in California, Colorado, Utah, New York; but when we come to make it National, our interests, climatic conditions, the seasons—we are so scattered that it will take a little time.

There is another point I might mention that was brought up this afternoon, as to telling the amount of honey we have, or advertising it, if you please, what we have received each year. I rather am of the opinion, as a business, we do not boast on what we have. I think it has been tried several times, to get from the subscribers of certain bee-papers a statistical report, that we might know what the honey crop was, and in part it has been a success, but largely a failure, from the fact that when we have a poor crop we won't say anything, and won't tell of it; and when we get a good crop sometimes we are a little—not only anxious to tell it, but some way it enlarges as it goes on, until the product seems to be immense. To overcome that partially, I believe it is possible through the National Association; it could bear the expense. The membership ought to know at least twice during the year what the bee-keepers of the whole United States are doing. We ought to know what States have produced an immense crop and what parts have little or nothing. We ought to know about what the price will be, and instead of—as Mr. Muth and some others have mentioned—throwing an immense amount of honey upon one market, as has been done in Chicago, while other cities have gone without, we ought to have some equalizer, through, perhaps, this National Association, so that we would know better. I have tried over my own State, while inspecting diseased bees, to check sending the surplus of honey on the Chicago market. Other places have been suggested, where they have found far better prices. It is not always advisable to crowd to the great centers with our product, because it does not stay there, it has to go out. The first question asked by the Reception Committee in California when we got off the train was, "How are the Dakotas, Minnesota, the iron and copper districts of Michigan and Wisconsin for a honey market?" It was rather a stunner to me what California wanted to know anything about that for; but, through coöperation, they had a salesman who was ready to go at a moment's notice to sell honey in car-loads, and he did go immediately after that convention, and he went right up into that country. He was investigating.

There's another side to what this National is doing that I rather regret bringing up, in one sense of the word, that is, there is a tendency, because we are strong in numbers, to impose upon brothers and neighbors with our bees. Some have done so, that could have been avoided, and had they not belonged to the Association they would not have tolerated what they have, and the boast has been made, "Oh, well, my bees have bothered, or if they do bother in your vineyards, as they do in California and some of the fruit districts, you will have to put up with it. I belong to an Association that will soon be 2,000 strong, and you dare not face it." I have had to settle by correspondence and legislation between 30 and 40 lawsuits in the short time I have been in office—a part of a year. It is not a credit to our Association, in one sense, that we have had that number of conflicts. I do say we have not lost a case as yet, although there are two turned against us, but the appeals of these look very favorable to our side; but almost all of these could have been avoided. I wanted to make a brief of each of those in my Annual Report, but I am sorry that, for the lack of time, it could not have been done. One member wrote me and criticised, saying, "Don't, under any conditions, if you make a report of them, say anything in regard to my case. It brings me personally out before the members of the Association, and I am really ashamed of the condition in which I have been, and you, through the Association, have protected me and got me on my feet—just keep my name out of it." So I have refrained from it, treating all as nearly alike as possible, and in various cases I have simply mentioned the locality, and not named the parties, the same as I do in regard to foul brood. There is something about the bee-keepers partially unjust, that is, to retain these troubles after they are corrected.

I am in hopes that we may, not far distant, have something that will have a tendency to help on this subject of marketing honey. The Association can do in many ways what individuals cannot. I remember it wasn't many years ago when this question of reduced freight-rate on shipping of honey was up. All honey went under the same class, whether it was comb or extracted honey. We all had to pay a high rate of freight. There was a committee to go before the railroad people to see if we could not get a reduction. It failed because it was not strong enough. It had been renewed and failed. Then more of an organization took it up, and got somewhat of a reduction. Through coöperation, in the West, they can ship honey from California to Colorado at much cheaper freight-rate than they could if it were not for their coöperative work. Now there is a possibility ahead that the National may secure something in that line. There is, as I said, a possibility that the Members of the Association can get their supplies, what are necessary, at somewhat of a reduction.

There was a case which possibly it might be well enough to call your attention to. Some years ago the trouble arose, in Canada, and was not settled. It was partially a local affair, but from the fact that we had so many other things on hand our former General Manager was partially compelled at the time being to ignore it, and it passed over until I became General Manager. I found the conditions were these:

There were over there between 20 and 30 members in the National Association, with a lot that wanted to join if they could see there was any advantage to it, and one of their number, who belonged to the Association, had been in Court, and had borne the expense, partially, and their bee-inspector had gone into his own pocket and borne out the rest, rather than see the bee-keeper beaten in a just and honest cause. They applied to me to know if the National Association cared enough about Canadian people to protect its members. I said, "Yes, so long as the Canadian members are a part of us, we think just as much of them on that side as on this, in any suit. We are going to show no partiality."

"That being the case," they replied, "we have had a lawsuit, and there has been a considerable expense, and the members of the Canadian Association feel that you ought to bear a part of it."

I referred the matter to the Board, and got an order to make settlement with the member. The result was they had a convention in a short time, and we had something like 60 additional members. They have had another meeting lately, which I have not had a report from, but I am satisfied there will be a large number more increase from that.

In Texas, a little while before our National Convention in Los Angeles, there was trouble at San Antonio. Two little boys living on a city lot adjoining one of our member's apiaries, took it into their heads to have a little fun, so when they would go by the bee-hives they would either hit the hives with clubs, or would throw stones or something which would jar and interefere with and trouble those bees, and they would then hide and watch the passers-by, and have the fun of it. That thing was tolerated for two weeks, and nobody entered any complaint until one of the boys got an eye swollen shut.

Now, the boy's father was working for the city, and he immediately applied to the mayor to have the bees declared a nuisance and moved out of the city. There was sympathy, of course, and the case came up and the bees were ordered out. But unfortunately there were a whole lot of other bee-keepers in San Antonio, and when one apiary went, all the others would have to go. We have a representative on our Board of Directors there, so I turned the case over to Mr. Toepperwein to take care of it. Through the suggestions of the members of the Board he has carried that case. It went into Court, and the Judge decided that there is no law in Texas, or in other lands, forbidding the keeping of bees in the city, and we won the case. But we could not have done that if we had not had a man on the ground. And when it came in Court we had present all the bee-keepers from the City of San Antonio, who owned bees in the city—like so many bees that had been dropped in the hive. There were 121 bee-keepers of San Antonio standing there in Court, buzzing mad, ready to fight. It meant something. He could not have won if he had not been a member of the Association.

We want these protections; but let us not aggravate troubles and thus bring them on unnecessarily. To avoid that I sent out over 4,000 copies to the members and to those who have been bringing complaint, of the little leaflets, "What the Courts Say," and the other one, "Bees and Horticulture." It has been a help, and if there is any one page that to me, in all of them, is dearer than any of the others, it is one of the last pages in the leaflet, "To the City Bee-Keeper." If the city bee-keepers—and it includes a large number of our members—would heed the warnings therein it would save us many dollars that we might use to spread out in literature or in some other way that would be an advantage to the members of the Association. For instance, soon after going out of their winter quarters, the city bee-keeper's bees—the charge will be brought by the wholesale next spring of bees soiling the clothes on the wash-line. You know what it means when they are taken out from the cellar, and it is quite an annoyance to the neighbors adjoining these city apiaries. I have suggested remedies—not a cure, but a help for it—that if you know the day that your neighbor is to wash clothes, and your bees are just going out, just delay putting those bees out until after wash-day, so that they may have the balance of that week to fly, and you will avoid a great deal of trouble.

Then, again, at a watering-place. I went a long distance at my own expense, where parties could not let their stock come up and drink at the tank. There were about 100 colonies of bees, and that was their only watering-place. I took a little piece of timber and put it around on the inside of the tank—a piece of 2x4, sawed to fit. It was a round tank. Then put a little waste-pipe and made a mud-hole away from the watering-tank. It is dry around the tank, and the stock come up and drink at their pleasure. The man who brought that complaint is going to have some bees next summer.

There was a brickyard in California. The owner had no bees, and had no interest in bees, but was compelled to stop making brick because his neighbor kept bees, and the bees crossed over the brick to the alfalfa field, and met the workmen so much that they got stung and had to quit work. The teams would get stung hauling the clay to the mixing. He applied to me to know what to do. "We would be good friends and are now," he said, "but there ought to be something done so that I could do my business without any trouble."

I asked for drawings of the ground, a plat of it. After looking the situation over I brought the two men together in this way: That on account of this you furnish your clay dump-cars, and the bee-keeper shall pay the expense, and transfer that apiary from there to the other side of the brickyard. They will be nearer the pasture, and will not have to cross the brickyard. They are both living happy neighbors ever since. Save trouble and keep out of court.

The growth of the Association has been one that perhaps has not been equaled, and I do not see why it should not continue until our ranks are doubled.

Suggestions have come to me from members, and I confess that I am always glad to receive from any members suggestions as to what they would like to have this Association take up for its betterment. I, as your General Manager, am simply trying to do what is your bidding, and if you have anything that you can suggest for the betterment of the Association, I wish you would give me your aid and help. Through this we know better what to do to meet the requirements of the various members.

The National pin represents an order, not only a group of bee-keepers, but an organization, and this is a day when almost every line of industry is condensed into organization, into union, into trusts. I do not know that we ought to go into a trust, but we can help one another greatly, and this pin means something. Now, then, to explain a point: At the National Convention there were a great many who were not enrolled as members, but wanted pins—wives, daughters, and sons, who had not joined the Association, and they wanted a pin; they wanted to wear it in honor of the Association. The question was, Should they have it? I had my instructions, and, of course, had to abide by them, and this style of a pin on my coat has cost us quite a little, too. The Board instructed me that the family could have as many as they saw fit, but as they cost quite a little it would be better that they pay the cost of the pin, that is, 10 cents each, which includes the postage. I would like to see all members of the families wearing the pin, but, of course, others look at it in a different light.

As to the literature that has been distributed, there is a possibility that some members of the Association have not received all the various kinds of literature that have been sent out. You will do me a favor if at any time there is any of the literature that is a part of the Association that you have not received copies of, or need more of them, if you will let me know it.

I do not know that I have taken hold of any work that has required almost night and day work as this has done the present year. I have sometimes felt as I did with my State inspection work, that it was too big a task with the other cares that I have, and that I would resign and ask the Board to put in somebody else. There's a great deal to do; there is going to be a great deal more to do; and although the dues have been reduced from a dollar to 50 cents on the larger portion of members, the aggregate is going to keep our treasury sufficient so that it will mean capital behind it, and I hope for success for the National.

N. E. France.

Mr. Niver—I wish to point out a circumstance that occurred to me with this button. The other day I went to deliver a package of honey to a lady, and she said, "Wait. Are you a member of the union? If you are a union member I will take the honey, but if you are not a member of the union, I will not take the goods." I said, "I am," pointing to my Association button! She paid for the honey, and I have the button.

Mr. Craven—I wish to ask whether there has been any move toward the organizing of the National Bee-Keepers' Association in a commercial way, that is, the pooling of our interests in the honey markets, and whether they have taken into consideration the markets, like the citrus fruit agency of California.

Mr. France—At the National Convention, Prof. Cook gave us a most excellent lecture on that subject, which is possibly an opening wedge, but the Association has not taken up that matter as yet in a way that we are in shape.

A Member—They have not thought of taking it up yet, have they?

Mr. France—Oh, various members and societies have thought of it and suggested it, but we have not as yet gotten into a practically working situation. For instance, the California Honey-Producers' Association, then in Colorado and the various States—they must develop something in their own districts practical to their localities, and finally they will adjust themselves into the National. I do not think it would be wise for the National to undertake it any other way. I would say, however, right on that same line, that if the various associations would refer the matter of marketing their honey to the General Manager of the Association he might make a suggestion. For instance, one locality has an abundance of honey and another has little or none. I have thought that it would be a very good policy if the members of the Association could know, each spring and fall, about what the markets are, where there is a surplus, and inform one another, and avoid, if possible, this overloading some localities and others going short.

A Member—Mr. France, have you thought of collecting reports of the honey-production of the different parts of the country, and issuing it as a National report to the members, or issuing an official statement through the bee-papers?

Mr. France—I wanted to get before the members of the Association early the fact that there were parts of the country expecting a good crop, and a great deal expecting a poor crop, and I wanted to get a statistical report of it early for the benefit of the Association, and these reports have been straggling in until there are something over 400 not in yet. They come in slowly, but so far as they do come in they will be a statistical report of the members' products in my Annual Report. I must say that I candidly believe that it is going to be one of the great opening doors for the marketing of honey for the members. A great many sell not only their own honey, but have to buy it, and there will be an exchange between members, and it will be a benefit to them. Dealers will know a little better where to look for the honey, and as to our concealing it from the wholesale men, we can't do it.

Mr. Wilcox—Will you not tell us if that same principle can be applied to the purchase of supplies as well as to the sale of honey?

Mr. France—Yes, sir, I think it can, very largely. I will admit that I have felt a little more duty bound to the members of the State Association than to the National, and to those of the State Association who were also members of the National. I succeeded this year getting the 60-pound can at about 18 cents' reduction, per case of two cans. Now, there are two sides to this. We don't want to interfere with the supply business. We want the supplies to be good, and we want the members to patronize the supply dealers; but it can possibly help to bring these things to the producers at a reduction. I don't believe the Association ought to be a supply dealer.

Mr. Wilcox—I wanted to suggest that the Association exists for our benefit, and not for the benefit of the supply dealer, and that whatever we may do for the benefit of the membership, legally, honorably, that properly *should be* done, regardless of the consequences to individuals or certain dealers or classes, but work for the common welfare of all; and I believe the purchase of supplies in large quantities may be worked by the General Manager, perhaps it is even more practical.

Mr. York—But suppose the supply dealer is a member; you would work for him, too, I suppose?

Mr. Wheeler—I have a peculiar point in view, in regard to buying supplies this year. I sent for prices on 15,000 sections to two different parts of the country, to two dealers, and these men did not vary a cent on price. They asked exactly to a cent. What did that mean?

Mr. Abbott—The price ought to be exactly the same for the same kind of goods every place. That is the way we are trying to do with honey; we are trying to make it bring what it is worth all over the country, and that is the importance of having this very thing. Now, Mr. France has about the levelest head of any man I ever heard talk, or ever had anything to do with this National Association. I am talking right to his face; but I have a way of talking what I think whether it suits or doesn't suit. My wife says I have too much of that. But let that be as it may. Now, it seems to me that we are getting at something, that we are mapping out some work that is consistent, sensible, that is on the earth, and that is on the principle of "live and let live," and the principle of general helpfulness. When you are asking all of these questions, and talking about these combinations, you must always remember that the other fellow can do the same thing. Now, I read in an agricultural paper the other day that certain trusts were doing certain things with the farmer, and if they kept on doing that the farmer would do certain things, and then look out! The editor thought that this was an evil, but in order to correct that evil the farmer should do something else that was evil; he should go at him in the same way. Now that was a mistake. If the thing was wrong in the other fellow, it was wrong in the farmer, and it was the wrong principle. Everybody in the world has to live. The man who belongs to a union wears clothes, and the man who doesn't belong ought to wear clothes if he doesn't, and he ought to have an opportunity to get the clothes, and to get them honestly, and fairly, and boldly, and stand up and look every other man in the face, as a man should do, and he should not be disgraced and held up to public ridicule because he is not this or that. He ought to be honored because he is a man, and has within him a living soul, and because there is something more of him than flesh or blood—because of his manhood, and ability—or because of her womanhood, you should apply it to women. Now we don't want to forget this; we are going to remember it. Now I am in St. Joe dealing in supplies, and if you drive me out of keeping supplies I will go to keeping bees and get in competition with you, and give you a rattling time, and then you would want to form a combination and drive me out of the honey-business, and I would go to farming. I would be certain to go to doing something, because I cannot die right away, and I don't want to, and I would have to do something, and I am just as apt to be in competition with you as I am in doing the thing that I am doing now. Now this is the way all this looks to me. I wanted to say this several times, but I did not have a chance to-day.

EXHIBITING HONEY AT FAIRS.

A Member—"Would it not be beneficial to the bee-industry to make honey exhibits at fairs?"

Mr. Hutchinson—It is one form of advertising. show the public how the bees look, and when they go up to the hives and see the bees storing honey you have a chance to show them the honey and show them where it comes from and show them the glass bottles, and you may get people to eating honey that have never seen it before. It is one form of advertising that is of benefit to us—to bee-keepers at large.

Mr. Niver—At the Pan-American they had a very elaborate show of honey, and immediately after that I went to selling honey at Niagara Falls, and I found that had educated those people there to the desirability of eating extracted honey, and I had a very good time selling it there. Now I have thought if the National would take hold of the St. Louis Fair in a practical way, and work it strong, it would pay largely. I have thought sometimes of starting a booth there myself, and selling buckwheat cakes and honey.

Mr. France—Right on that line of the Fair at St. Louis—someone, I believe, made a suggestion at Los Angeles, of having some central head to the St. Louis Exposition, and that the various States, through the National Bee-Keepers' Association, could, by some system, make the honey display there a credit to the bee-keeping industry. Some of the States have very liberal appropriations, so that they will have fine exhibits, but I am ashamed to say that my own State has put so much in other exhibits that if there is anything it will have to be individual donations. A good many of the States are going to wait a little too late, and the honey product of this year, which is so fine, will have been disposed of, and what will we have to make the earlier of the display at St. Louis? I am afraid that we are now even a little late, and if the various State societies, through their secretaries, could come in touch with the National Association through correspondence, I believe we can, even yet, systematize this matter to make that exhibit a little more creditable.

Mr. Duby—May I ask if there are any here who have ever made exhibits at fairs, and what the results were?

Mr. Johnson—I exhibited honey once, in Allen County, Kan., about 15 years ago, and I got the first premium. There was no other honey there.

Mr. Abbott—I might say that I have exhibited at fairs, scores of times. At the last one I had $1,200 worth of stuff, and it all burned up, and I have not made any more exhibits since. I had no insurance on it. But I think that anybody in any community where there is a fair, can go to work in four or five years, by working the matter properly, and get liberal premiums offered—premiums enough to pay for setting up their exhibits, and build up an excellent honey-trade. When I came to St. Joseph there was nothing there in the way of honey exhibits; but I soon had them so that they were paying $250 premiums. One season I got it—my wife bossed the job. She set the exhibits up and bossed the job, and I furnished the money. But really there is a wonderful possibility to it, especially if you have a city like St. Joseph behind you; and you have no idea, if you have not studied the matter, how it will attract the attention of people, if you put out colonies of bees. The people would come along there, of those worthy 400—they live to eat, and eat to live—and they would say, "Oh, there, see the wax! See the bumblebees!" Or, "What is that? Is that maple syrup, or is it beeswax?" And they would ask you questions for awhile, and say, "Oh, mamma, I wish you would buy a case of that fine honey." And they buy it, maybe people who had not used a case of honey in their lives, and the next year they would have more honey, and the next year the coachman would drive around and say that Mr. So-and-So wanted a case of honey, and he always paid a good, big price. Charge him 5 cents a pound extra for it. And the problem was solved as to where there was a market for some honey. Now it seems to me that you could do a lot of that in any large city, or even in a small place.

Mr. Whitney—I was simply going to say that I have made a few exhibits at county fairs. I do not know whether it resulted in any particular benefit or not. I never produced any great amount of honey, but always got rid of it.

Mr. Craven—I think Mr. Root can tell us more about exhibits at fairs. He was at the Pan-American, and ought to be able to give us a few hints.

Mr. Root—I do not know that I can give any good information about this business. From the manufacturer's standpoint it is of little value, if I am correct; that is, during my stay at the Pan-American I did not sell enough goods to pay my way, but it was simply in advertising and educating people. I believe that it is a good thing to educate the people at a fair. I will never forget some of the things I heard there. People came in, and one very nice lady explained to another how the bees bored a little hole into the cake of wax, and another little hole next to it, and they bored so many little holes that they had the combs, and the queen-bee came along and laid an egg in each of these little holes! It is very amusing. I explained something to her after that that made her look at it in a different way; but they don't seem to know anything that is the truth of it. They called extractors "ice-cream freezers," and they even called my frame of bees "cockroaches." These things I will always remember. But the thing, it seems to me, that makes this exhibiting profitable is educating the people. I do not see how anybody could buy honey, or would want to eat honey, if he thought it was made by cockroaches or turned out in ice-cream freezers. The people came there and were so interested that they staid two or three hours when they had only one, two or three days at the Pan-American; and I am sure those people are going to buy honey. And then there is another thing: I don't know whether it is of any great practical advantage or not, but that is, a good many school-teachers came up and wanted to learn all they could about the bee-business, and they were going home to teach the children in the public schools these very things. I do not think that it does any harm, and the school-teachers do not have an opportunity to find out about such things. They don't seem to know where to get their information. I think that it is a very good thing; but take it all in all, it's educating the people that makes it advantageous.

Mr. Whitney—I happened to think that, speaking of educating the people, I have had during the past summer threescore of people visiting my bee-yard, and I have taken special pains to give them all the education I could possibly impart in the yard. Even Mr. Baldridge was there. I did not attempt to tell him anything about bee-keeping, but there were plenty of others who were very much interested in bees, and in fact, I know of two or three ladies who are now keeping bees, after visiting my yard; and I think that I imparted some information in regard to the use of extracted honey, and I sold nearly all of mine granulated to that class of people after they had been to the yard and saw what I was doing.

Mr. Wilcox—I thought at first that I would not say anything on this subject, because I am more anxious to hear what others think. I have wanted to know this a long time. I have had this subject on my mind for about 10 years. I was here, as you know, at the Columbian Exposition, in charge of the Wisconsin State honey exhibit, and I might say this at the outset, as Mr. Root has stated, the chief advantages are the educational advantages. It pays in almost any industry to educate people, in bee-keeping especially. It is the one thing that we need most. We are not educating the people by making exhibits, if we simply go and place our exhibit there in proper position, as attractive as we can, and go away and leave it. Thousands of visitors will pass it daily and never know that they have seen anything. Some, perhaps, are so well acquainted that they will know it is honey; others will see it and say it is pretty, or not pretty, and go on. But if there is someone there to answer any question that may be asked concerning the production or use of the honey, then there is information given that does somebody some good, and continues to spread, and as you continue going there from morning to night, day after day, through the season, you have done a great work, and that work tells for years to come. It is certainly a benefit, and in this respect I might say that there is just the same benefit in exhibiting honey at fairs that there is in exhibiting grains, butter and cheese, and vegetables, live stock, or any other commodity; they all do it for a purpose, to show to the people what others have done that they may do; it advertises, and in many ways builds up trade. It promotes commerce and production. It promotes consumption. It is promoting business. If it is properly done, it is profitable; if it is improperly done, it is a waste of means.

Mr. Smith—I wish just to state that I made exhibits at the Illinois State fair several times. Mr. York will remember he was judge at one time when I had an exhibit, and I made the first exhibit of section honey at the Illinois State fair that was ever made. We had sections there which dovetailed. There were four pieces, and we would stick them together, and the people wanted to know how the bees knew there was a pound of the honey in them! Three years ago I had a miniature mill, representing an old-fashioned water-mill. I had a full sheet of brood-comb; then I had a stream of liquid honey running from back of a curtain, through a wax trough down into the mill, that turned the wheel, and people would come along and see that, and say, "Are the bees making that honey as fast as it comes out of the mill?" They would ask all kinds of questions, and I had an extractor there, and was extracting, and every once in a while we would extract, and they would say, "Look at that man churning honey!" When I would hear that I would inform them, and they would become interested, and stay and ask all kinds of questions. One time there was a gentleman and lady came along, and asked me if the bees were making that honey. It was late in the evening, and I said, "Yes." The man said, "It is dark. I don't see how the bees can make honey in the dark." I said that I had succeeded in crossing a lighting-bug with bees, and they worked in the dark; and they actually believed it!

Mr. Niver—Mr. Hershiser, at Buffalo, says that he got up an illustrated lecture and gave it at several of the public schools, handling the bees and combs, and taught the children. They are more teachable than the older people; they will remember longer and get things straighter. And he has succeeded in working up a very nice trade in Buffalo. I have thought sometimes it was possible to take a swarm of bees and get them so that they could be shown in the schoolroom for an illustrated lecture, but have never dared try it.

Mr. York—I have often wondered how we got orders for honey from Buffalo. Now I know.

Mr. France—On the same idea, our State Normal School sends out about 400 teachers a year, as teachers in the public schools. While I was student there in the school I felt the need of something of this kind, and there were suggestions offered by the students, until it has been now the eleventh year that the Normal School sets apart a piece of a day for instruction on bee-culture, and they come to my house if I have not time to go to the Normal School. They have been there by the score ,and they want to know all there is about the bee-business. This week my little boy, seven years old, just starting in, got up and contradicted the teacher, and said, "I know better." Well, they tried to down him, and if you ever saw an angry boy he was one. When he came home, he said, "Papa, when are you going to have that bee-lecture? The teacher goes on and says so and so about the bee-stinger, and I told her I knew better." The class came out the next day solely to learn what a bee-sting was, and what the bee's mission is when it is depositing that honey, and I explained it to them. On this subject the education is going on, and it is a part of the Wisconsin requirement of the teacher now to teach agriculture in all the schools, and bee-keeping is becoming a branch of that in all the rural districts.

Dr. Miller—I will tell you a little experience I had, and I want to warn you if you go to lecturing in public schools to practice a little at home before you go. Last week the principal of the high school asked me to come and spend an hour in talking to the pupils, and one of the first things I did was to tell them about the bee-sting. I made a picture of it on the board and attempted to tell them how it would work. I had all the barbs running the wrong way, and the thing did not work. If you are going to try it, practice at home a little.

Mr. Moore—It is an old saying that Pres. York and others have said many a time, that if the honey in this country was distributed as it should be, there never would be an overplus. Every one of you, it seems to me, could work up his own home market in some such way as this, so that almost no honey would be shipped to the great centers. Now you have no idea what can be done in the way of interesting people with the commonest things around our apiaries. I will tell you how I worked it here in Chicago. One summertime, to amuse myself and experiment on the people of Chicago, I thought I would try a new thing for this neighborhood. I got up a box of regular length and height of a Hoffman frame, so that I could set in it two frames, with brood and bees, having perhaps two or three thousand bees; glass on both sides, and a handle going over the whole thing. I filled that with bees, and I spent days and days on the streets of Chicago. Now my experience was most interesting. In my 12 years here I had made acquaintances with policemen and all sorts of people. I said to the policeman at the corner of Adams and La Salle streets, "I will block your street in about five minutes," and he didn't believe it. I had in my arms my little nucleus hive which held probably 10 pounds, and held it up to the policeman so that he could look at the bees. Everybody that came there stopped—there wasn't a soul went by. He began to look uneasy inside of three minutes, and said, "I guess you are right." I moved on down the street. I took the bees into the private office of the Chief of Police, and said, "I want to talk on bees in the center of the city." Some of the policemen and the inspectors knew me; and he said, "That is all right. He does not want to sell anything. He simply wants to exhibit the bees." I went up on the Court House steps—the top step on the Clark street side, and I soon had two or three hundred people there. I don't know where they got their leisure, but nobody seemed to go out of the crowd while I was there. I had the top of the hive screwed on with screw-eyes. I could screw them in and out with my fingers, and I took out four, one at each corner. Then I took the bees right out, and they thought it was something tremendous; and for three or four years after I made my exhibit people would say, "You are the fellow that had those live bees. Why, this fellow handles bees like flies. They go all over him," and so on. I did not take the trouble to explain that they were drawing it mildly, but I dropped that question, and went on to teach whatever came up. I did other things. I would take a frame of honey and a frame of empty comb. After we have extracted our honey how beautiful the comb is, if it is a bright yellow and empty; just the mere wax, and you hold it up to the light, and you can see the cells on the opposite side breaking joints, as I explained to them. Three cells are opposite one cell on this side, is opposite a third of three cells on the other side. And they would say, "Is that so?" If any of our producers all over our great land will take pains to exhibit but the commonest things, to get acquainted by advertising in the journals and by exhibition of these common things, they can sell enough more honey at home, so that the honey question and the price of honey will be settled.

Mr. Meredith—I was going to say, in regard to the advertising of honey, that a park adjoins my place, and I went there with an exhibit of honey, for the purpose of exhibiting and selling it. I put it up in bottles from half a pound to the Mason fruit-jar, but my sales were slow. A candy-maker had no trouble in disposing of his wares in packages for five cents. I bought ten 2½ ounce bottles, got labels, filled them up and sold them for five cents apiece to anybody, more especially children, and from that form of an advertisement I increased my sales in two days from $6 to $34.50. I had signs painted and nailed upon a tree, and I had very curious questions asked in regard to the honey produced, whether I got it out of the trees, etc.; but I took that as a form of advertisement to introduce and sell honey, and found it very satisfactory.

KEEPING BEES ON A FLAT ROOF.

"How many here have ever kept bees on a flat-roof house?"

Pres. York—Mr. Purple here in Chicago used to keep about twenty-five colonies on the roof.

Mr. Muth—No, there is no objection at all. We produce just as much honey in the city as you do in the country.

Mr. Horstmann—Do I understand Mr. Muth to say that you can produce as much honey in the city as in the country? I think if he was in the center of Chicago he would find he was mistaken.

Mr. Muth—In Cincinnati you can take a hop, skip and a jump to go over the city, but that is much smaller, and we have hill-tops where there is lots of sweet clover. In early spring it is yellow, and in a week or two or three it is all white as if a frost came; and we can produce as much honey near those hills as you do out in the country. I believe one man had there 350 pounds of honey to the colony, right in Cincinnati. Of course, here you would not get the same results.

SELLING HONEY BY THE POUND OR CASE.

"Should honey in the comb be sold by the pound or by the case?"

Dr. Miller—Yes.

A Member—Whichever way you can get the most.

Mr. York—I prefer to buy it by the pound.

Mr. Niver—I prefer to sell it by the piece. I think merchants prefer that, and greatly prefer it. My trade was in the anthracite region of Pennsylvania, and I worked it for 10 years there, and found that it was much handier that way, and my customers got so they insisted on buying it that way. There is no figuring for the merchant. He buys for 12 and sells for 15, and he knows just what his profit is. If he buys by the pound it takes a good mathematician to tell—he can't get it exact, and that is not pleasant for the merchant. My idea entirely was to do the best thing for the merchant—pack the honey for him so that he will have as little trouble as possible, and we work for that idea steadily, and that was one point I made: Pack in a case all exactly alike; if it was No. 1, put everything in there that was No. 1: No. 2 do the same, and charge in accordance with its quality. If the merchant had a fancy trade he was willing to pay a fancy price; if he had a cheap trade he took the cheap quality.

A Member—If the merchant buys by the pound, can he figure by the piece?

Mr. Niver—One of the commission men told me he had very great difficulty in selling very fine honey. It weighed over a pound apiece, and the merchants did not want to sell any such honey. They were obliged to sell by the piece, as the competitor did who had lighter-weight honey. The finer honey remained there, while the poorer honey went off rapidly.

Mr. Kannenberg—I think Mr. Niver is in a different light than I am. I would rather sell my honey by the pound, and I know the merchants to whom I sell it would rather buy it by the pound, because they sell it by the piece, and they do not have to figure if the box weighs an ounce or a quarter of an ounce less. They sell it by the section for so much, and don't have to weigh it at all.

Mr. Wilcox—I have had some experience. I wanted some honey very badly this fall. A friend of mine 10 miles away had some to sell. He was one of those men that was just as positive as I was. He would sell by the piece and would not weigh. I would buy by weight, and would not buy unless I could see the pieces, and I could not buy it. They were 24-pound cases. We could agree on the price of the cases if we could know how heavy they were. Could not do that. Now these cases might have weighed 15 pounds, 24 sections. They might have weighed 25 pounds; they might have weighed 20 pounds. I know from years of experience that ordinarily they weigh not less than 22 or more than 23, but some weigh as low as 15 or 16, and some as high as 25, and I could not afford to buy. I don't want to buy honey by the piece unless I can see the pieces. Now if you guarantee them to weigh or to average any certain weight, it is equivalent to weighing them. That is the very point—if you guarantee these cases to go about 22 pounds, and they do not go over 18, it is no sale. If they go 26 pounds you have given them honey for nothing.

Mr. Niver—You have struck a point right there. I sold by sample, and my sample was guaranteed to be the poorest sample that could be picked out of any case that I sold. A No. 1 would be guaranteed nothing poorer than that, and that everything would be as good as that or better. I did it that way. Why did the merchant prefer that? When you sell by the pound the bee-keeper would put his fancy, his No. 1, No. 2, all in one case to make it average a certain amount; but when the merchant tries to sell by the piece how is he going to grade it? He cannot say, "Take your choice," when one is worth double what another is; one weighs 10 ounces and another 16. You are obliged to grade correctly when you sell by the piece, and you are obliged to pack your honey so that there will be practically no choice—the last section in the case you sell as quickly as the first; and that grading I advocated in New York City, and it went into use so that it was quoted in the papers by the case in New York a good many times. A good many dealers quoted it by the case instead of by the pound, and I believe that that suited the merchants much better, because if they had only No. 2 honey they wanted to pay No. 2 prices, and if they wanted fancy honey they paid for that.

Dr. Miller—If he graded them all so that each case was exactly alike, how many grades did that make?

Mr. Niver—In our country it made nine.

Dr. Miller—Did you ever grade any honey that way?

Mr. Niver—Tons and tons of it. The way I came to do that was that in our Association they gave me all the honey to sell for a number of years. In our County Association there were quite a large number who put all their honey in my hands to sell, and I graded the whole of it, and we had three colors for honey, and three grades. We had fancy, No. 1 and No. 2; three colors, white, dark, and mixed, and the mixed was sometimes three colors, and that made the nine grades.

Mr. Clarke—It seems that the thought is to educate the bee-keeper or the merchant to beat the public. I think if all these endeavors were to be put to educating the public to call for what rightfully belongs to them, 16 ounces in their boxes, it would help the bee-keeper a good deal more. Most of you want a light box. He gets paid by the pound. Some of them want 12 or 13 or 14—hardly ever 15 ounces. If the customer comes in he thinks he is getting a pound. They charge 20 cents whether there is a pound of 16 ounces or not.

Mr. Hammersmark—I think if everybody was perfectly honest, we could sell by the piece as well as by the pound; but the trouble is everybody is not honest.

Mr. Starkey—I believe we are all honest with ourselves; that is, we claim for ourselves what is right. I noticed, a short time ago, an enterprising groceryman in my town that took a large quantity of honey, and he advertised it for sale at 18 cents a package. But it happened that these packages, he stated were full weight; and I had noticed a great many people there; and he told me that he had a remarkable sale of this honey, and it was good honey, but the fact that it was full-weight honey had as much or more to do with his selling it than any other thing. There is a great deal of honey that is to be bought at the same price that is a little short, and people are not so stupid as we are sometimes inclined to think. There are certain places where people have never made any inquiries, that have never heard that honey is ever sold any way but by the section, and if they are wrong they don't know it, and if they are satisfied with their price it is all right; but I believe that if we will say, "I can sell you a full-weight section," the bee-keeper's conscience will be easier.

SECOND DAY—Forenoon Session.

Mr. York—We are fortunate enough to have with us this morning Rev. McCain, who is in active service. He will offer prayer.

Mr. York—The first number on the program is an address by W. Z. Hutchinson, President of the National Bee-Keepers' Association, entitled,

EXPERIENCES OF A FOUL BROOD INSPECTOR.

Mr. McEvoy, Ontario's most efficient Inspector of Apiaries, says it is easier to manage the bees than it is their owners, and I certainly agree with him. It is all right for an inspector to understand foul brood, to be able to recognize it, know how to treat it, and all that, but unless he possesses tact, and is a good student of human nature, he will labor in vain.

The greatest share of our inspector's troubles come from ignorance on the part of bee-keepers. The man who is largely interested in bees, who reads the journals and books, seldom gives the inspector any trouble. The man who has a few colonies, knows but little of bee-keeping, and cares less, who simply hives swarms and "robs" the bees in the fall, whose colonies, when they die, always perish because of the millers. This is the man who causes the inspector no end of trouble. I visited one such man four times before I succeeded in ridding his apiary of disease. Possibly I might have accomplished the same result with a less number of visits by invoking the assistance of the law, but this is a course I have never yet found advisable to follow, although I may some time be driven to this expedient.

This man had once made considerable money out of his bees, having as many as forty colonies at one time. They had died out and dwindled away. His idea was they had smothered in the winter, or were destroyed by the millers. Four colonies remained alive. One (a swarm that had that year built its own combs) was free from disease; the other three were "on their last legs" with foul brood. On my first visit he was not at home, but I showed the foul brood to his wife. On the evening of that day, after 8 o'clock, I drove 12 miles to see him and talk with him. He had never heard of foul brood, and didn't believe there was any such thing. Carefully and thoroughly I went over the ground with him, several times, read him the law, etc. He finally admitted that there might be such a thing, but he knew that if it was of the nature given it could never be eradicated. I told him that it was too late in the season to treat diseased colonies; besides, his were too far gone for treatment; that they would die before spring, and the honey that they left would be a source of contagion to all of the bees in the neighborhood; that the only thing to do was to destroy the bees and combs. I told him I would be in that neighborhood in two weeks, when I would call again.

He was quite glum and stubborn about it—"was very busy, and didn't think he would have time." I left him some literature and went on. When I came again he was very busy picking peaches and couldn't possibly stop. I offered to do the work myself, but he wanted to be present and help if it "had got to be done."

Next time he had threshers and could not stop. I said to him: "My friend, I have been patient with you, but I can't keep coming here every two weeks. The next time I come something must be done. Now set a time when you can work with me and I'll come."

He set a day; met me at the station with his carriage, took me home with him, and took care of me. He provided a large kettle or "cooker," and, the next morning, I put on my overalls, and we went at it. The bees had died in about three dozen hives. The combs had stood there and been eaten by the bee-moth larvæ, and mice had made their nests in the hives, and, taken all in all, it was a nasty mess.

The frames were put into the big kettle and boiled; the refuse in the hives burned under the kettle; the hives painted on the inside with kerosene oil and burned out. The three diseased colonies were brimstoned, and the combs burned. We worked hard all day, and my friend was really pleased with the results. He had at last become convinced that there was such a disease as foul brood, and that the only course to get rid of it was the one we were following. He said:

"I must say, 'Well done, good and faithful servant!' I am glad you came, and made me clean things up. Perhaps I can build up again now and make something." He drove me to the station, and parted with every expression of friendship. I think such a course more desirable than "enforcing the law."

At another time I was called into a neighborhood by a young man who was trying to get rid of foul brood, but could not, because there was so much of it scattered around him. I found some three or four small apiaries that were about "played out" with foul brood, and ordered the owners to destroy them. It seems that my predecessor had been in that neighborhood the year before, so the people had heard of foul brood. When I came back in two weeks, not a colony had been destroyed. At the first place where I called the man had gone to the lumber woods to work; the woman was away visiting at a neighbor's, but a boy of 15 was at home, and coolly informed me that "folks of that neighborhood had been 'talking it over,' and had decided that they were not going to have their bees destroyed." I wasted no time on him, but hunted up his mother. She said her husband had not had time; he would be home in two weeks and would surely attend to it. I reminded her that he had made me a similar promise two weeks ago, but had not fulfilled it. I could not keep coming every two weeks. I must see the bees destroyed before going home. She questioned my authority in the matter—said any one might come along and claim to be a bee-inspector. I showed her that no one could gain anything by so doing, and also showed her my commission of appointment, with the big seal of the government, and the signatures of the officers who appointed me. This seemed to satisfy her on that score, but she was very sarcastic. "They would be having *chicken* inspectors yet!" But she would not consent to the destruction of the bees. I told her that while I had the authority to destroy the bees, and that she laid herself liable to fine or imprisonment by her refusal, yet I preferred to haye her consent. At last she said that I could "do as I thought best." I asked her if she would come home and see the work done. She came, but talked very bitterly all the while it was being done.

The next bee-keeper, a neighbor of the woman just mentioned, had said, so it was reported, that "no inspector could burn any of his bees. He would set the dog on him." By the way, he and I had had some pretty stormy arguments upon my previous visit, but I had learned that a man can cool down quite a bit in two weeks. I went into his yard, found him at home, talked with him quietly, showed him how much better it would be to destroy the diseased colonies and thus be rid of the disease; and that I was going to clean it all up in that neighborhood. Finally, *without waiting for his answer*, I said, "You go and get a spade and dig a trench, and I'll light up the smoker and get it going and put in some sulphur, and by the time you get the trench dug, *I'll* have the bees dead." I looked him right square in the eye, and it seemed to me as though it was my will against his, and that he *must yield*. He started after the spade, very slowly—*but he went*. The strain upon my nerves, however, was a little severe.

Perhaps the most obstinate case I ever found was a man with only one colony. I did not think there was any foul brood there, and stopped while going by on my way to the train. The combs were fairly rotten with foul brood. The owner stood back about a rod away in the cornfield while I opened the hive. When I showed him the rotten brood he declared there was just such looking brood in every hive in the country. He offered to bet any amount of money. He would show this brood to "Doc Smith." I told him he was at liberty to show it to all the bee-keepers he could find, but it would make no difference in the end, as the inspector was the one to decide. He declared he would not destroy his bees, nor allow them to be destroyed. I called his attention to the law, how he was laying himself liable. "He didn't care for the law." My time was limited. I had no time to argue, so I drove on. When reaching home I wrote him a long letter, sent him a copy of the law,, and a notice either to destroy his bees or have them treated inside of three weeks. I told him I should call again in three weeks, and would shake them off or destroy them, just as he said, if he had not done it. When I called he was away, but he had left word that I might shake off the bees. I shook them and burned the combs. His wife asked if they would not need feeding. I told her they certainly would, and gave her full instructions how to do it. Of course, I know that the bees will not pass the winter alive, but I got *rid of the foul brood*.

I think this should be the motto of every inspector, *"Get rid of the foul brood."* Every case may call for a different kind of treatment, but, whatever the treatment, let it end with getting rid of foul brood.

Perhaps some of you may think that each man should be treated alike—if you destroy one man's bees you ought to another's. Not so. Here is a man with 100 colonies of bees. There may be a few diseased colonies—slightly diseased. He thoroughly understands the disease and its treatment, and is doing all in his power to rid his apiary of the disease. As fast as he finds a diseased colony he treats it. He has a neighbor half a mile away who has four colonies in box-hives, or in frame hives with the combs built crosswise; the hives are old and rotten, the combs are rotten with foul brood, the bees few in number, and the colonies will all be dead by spring, when the bees from the 100-colony apiary will come over and carry home its diseased honey. The owner may promise to destroy the bees but he does not perform. Can you treat these two cases alike? I say *no.* I burn up the colonies, bees, hives and combs, slick and clean, and so far I have succeeded without recourse to the law.

Unpleasant business? Well, you try it for awhile, and if you do your duty, and *"get rid of foul brood,"* you will find fully as many thorns as roses.

The professional bee-keepers give no trouble. They give every possible help and assistance. They look upon the inspector as a friend. He is the man who can *compel* an obstinate neighbor to "clean up"—something that they can't always succeed in doing.

As I said at the outset, ignorance is the one great obstacle. Mr. France has gotten out bulletins that have been scattered far and wide, and I suppose they have been a great aid in his work. I wrote an article describing the disease, giving methods of treatment, together with the law on the subject, accompanied by an engraving showing a comb of brood, badly diseased, and this was published in one of the monthly bulletins of the Dairy and Food Commission, and he had published 2,500 extra copies. I furnished him a list of 2,000 bee-keepers in Michigan, and he sent out copies of the bulletin to this list. He gave me 300 or 400 to use in my travels. When a bee-keeper complains of foul brood in his vicinity I send him a dozen of the bulletins to scatter in his vicinity. By the time I get around to visit him the bulletins have done *more than half of the work.*

Every inspector should have some literature of this kind at his disposal, and bee-keepers should take it upon themselves to see that it gets into the hands of their neighbors.

Perhaps some good might be done by writing short articles on the subject and having them published in farm papers, and in the general newspapers.

W. Z. HUTCHINSON.

Mr. York—Are there any questions you would like to ask Mr. Hutchinson? We had this pretty thoroughly discussed yesterday.

Mr. Abbott—I want to make a motion along that line, that just occurs to me. Mr. Hutchinson suggests sending out these bulletins. It is a thing the National ought to take up, and it seems that right now we might start the influence that would do some work, and I don't see why the National Association wouldn't give us a bulletin. I move that we request the Governor to request the Secretary of Agriculture to issue a bulletin to be distributed with farmers' bulletins, as others are.

Mr. Moore—I wish to amend this motion materially and see if Mr. Abbott will accept it. I move that our convention do request the National Association to formally ask the Secretary of Agriculture to take this matter up with them with a view of publishing a bulletin such as is mentioned, on foul brood.

Mr. York—Will they be understood to work through the National?

Dr. Miller—It looks to me this way, if we do that, wait for the action of the National, we don't gain anything. Anything we do here would do nothing more than to get the National to act. If two men ask me a thing that will have more effect upon me than if one does it, and if the Governor is asked by this society to do a thing, even if they say no and somebody else asks it, I think we will do more by making it a direct request, and then let the National make the request afterwards.

Mr. Abbott—I had that in view, and I should like to see this motion on its way to Washington tomorrow. I am a fellow who does a thing when I think of it, and while I am in the notion. That was my reason for making it direct. I thought first of requesting Mr. Wilson to do it. He will do it without any request, and he will second it without a request, but we better make the initiative and let Secretary Wilson know we mean business, and I know him well enough to know that you will get a response at once, and Wilson will refer it to Benton. Secretary Wilson is the head, and he will attend to it.

Mr. Wilcox—Mr. Abbott put in what I was going to say, and that is, that Mr. Benton is the man to publish the bulletin, and he is well acquainted with the National Association, and a personal request from them would probably produce the result without any further action.

Mr. Abbott—My motion is to have it go to the Secretary of Agriculture. It will go to Mr. Howard and then to Mr. Benton, but if Mr. Wilson says it has got to go, it goes. If you go to the other end, you commence at the wrong end.

Dr. Miller—I believe we will gain time if the mover of the amendment will think of it right. What do we gain by using our influence second-hand.

Mr. Moore—I withdraw the amendment.

Mr. York—Mr. Abbott, will you please state the motion as it is now?

Mr. Abbott—I move that the Chicago-Northwestern Bee-Keepers' Association request the Secretary of Agriculture to issue a bulletin on foul brood and other bee-diseases as a farmers' bulletin, to be distributed with other farmers' bulletins, and that the secretary be requested, in forwarding the motion to the Secretary of Agriculture, to give him such statements as to the importance of a bulletin of this kind as he may deem necessary.

The motion was carried unanimously.

Mr. York—It might be well for individual members to write the Secretary of Agriculture after it goes in.

Mr. Abbott—I move you that this body ask the General Manager of the National Association to second the effort we are making, to secure a farmers' bulletin on foul brood through Secretary Wilson.

Mr. France—The subject was brought up at the Los Angeles convention and if we hadn't gotten into some other conflicts, there would have been a motion made on behalf of the California convention. I had a talk with Mr. Benton and he said, "You bring up your local associations and the more that come the better." It bears its weight. I expect to be down in New York in January, and they are going to have their individual request for a bulletin, and I think it is not far distant before it will be distributed.

Mr. Smith—As I am chairman of the official board of the State Bee-Keepers' Association, I will also have our Association make the request.

Mr. Muth—We have in Hamilton County, Ohio, a bee-keepers' association, and I have the honor of being on the executive committee, I am glad I am here.

Mr. York—So are we.

Mr. Muth—We will have that in writing and forward it to Mr. Wilson. We will do that.

Mr. Abbott—I will see that the Missouri Association sends in one.

Mr. York—We have the Secretary of the Northern Illinois Association here.

J. W. Johnson—I fully decided in my mind that as quick as I get home I will write the Secretary of Agriculture and request him as we have spoken here.

The motion was put and carried unanimously.

Pres. York—Now, before we go on we will take up the matter of joining the National in a body. We have to do this annually in order to have half of the dues we pay here go to the National. What will you do about it?

Dr. Miller—I move that we renew our action in the matter and join the National in a body.

The motion was seconded and carried.

FORMING LOCAL ASSOCIATIONS.

"Should bee-keepers form local organizations? If so, why? And how?"

Pres. York—I suppose that means in certain districts of the State or county. We have one here in northern Illinois. That would be considered a local association. They have one in Cincinnati.

Mr. Abbott—In answer to that I would say that every kind of people in every kind of industry on earth should be alive with each other and in fraternal help, to help themselves and attempt to help everybody else, and that's one of the best reasons for forming these organizations that I know of. I should say yes. As to what they shall do, that's a matter of discussion for each local organization. Everybody sees how the matter is. Secretary Wilson will pay more attention to a dozen letters which he is sure to get in regard to this talk, and every State and every county can do the same thing. It isn't for the interest of the bee-keepers just here in Chicago that it will work. It will work for every bee-keeper, even those who never belonged to any association. Let it go out that there is an advantage in union if it is only five people. Take a church of five women and they meet together every week and have a real, real good time, and promote wonderful good in a community, and it is the same way in other industries, and it always helps. It helps me to just leave my store and go over and talk to John Smith who is in the same business. I pretty nearly came all the way from St. Joseph, Mo., to see Mr. York because he is interested along certain lines; simply to get inspiration, suggestions, and help. That lifts me up. That's my idea.

Mr. York—Mr. Abbott says he very nearly came all that way to see me. I don't believe it would pay him, but he says he might do that. It would pay sometimes probably for us to get together and see persons. I have had gentlemen come to see me about certain matters, and it seemed to do them good, and I know it was good for me just to meet them.

Mr. Johnson—I am satisfied that local organization is a good thing, and especially in selling honey, but I would like somebody to tell us how we are going to get a local organization.

Mr. Whitney—I think we will agree that an organization is a good thing, but it is sometimes difficult to know how we are going to get them together. At our place I have taken a little pains to try to get bee-keepers together at Lake Geneva, and I have written half a dozen letters and I don't get a response from a single individual. We are going to try it, though, and see if we cannot get an organization. I think if we had an organization at Lake Geneva, individuals wouldn't be rushing their honey to the grocers at 10 cents a pound as they did, and lose money by it, too. I tell you, an organization is what every county that has a number of individuals engaged in the same business ought to have.

Dr. Miller—I very strongly suspect that if a man were obliged to answer that perhaps he would answer it all right, and he might say—well, I don't know all about it, and I would like to call on Mr. J. E. Johnson to tell us just how he would go to work to get up an organization in his neighborhood.

Mr. Johnson—I have been trying to organize an association of our county, and of course, I would like to take in other counties. I have talked with a great many, but I have never talked with any but what say it is a good thing, just the thing exactly. I have started out a little on that line, and that is to write all the bee-keepers I know of in the county, and put an advertisement in the daily paper to get the address of all I don't know, and then try to have a meeting; then organize, and your other meetings would depend upon the success of that one.

Mr. Hutchinson—I started an organization in northwestern Michigan. I got a notice in all the bee-papers, stating that on such a date a meeting for the purpose of organizing a local bee-keepers' association would be held. I put a notice in all the daily and weekly papers, and in adjoining counties, and wrote the editors and said I would thank them to give a notice of the time. I wrote to some of the dailies in Detroit of our attempt to organize, and wrote postal cards to any bee-keeper I knew in that county and adjoining counties, and asked them personally to come and organize an association, and when the time came there were about 30 bee-keepers present, and we organized. We have an organization there now.

Mr. York—I want to say that you won't find the papers charging you anything for the notice, and when you get together you will find a date to suit the majority.

Mr. Niver—We have a bee-keepers' association. Two men started that. Mr. Coggshall and Mr. Morton. They announced a bee-keepers' picnic in June and advertised it through the papers, and the bee-keepers from around there as far as 25 miles all came to the basket picnic, and they organized that way. It was a large gathering, and it wasn't just bee-keepers, the whole public was invited and it has been for 15 years a very prosperous association.

Mr. York—I don't think it is necessary to organize a county association. There might not be enough in one county. Perhaps one county is all right; Hamilton County, Ohio, and Cook County, Ill., would be, but we thought best to spread out and get more. I don't think you can have more than one really good bee-keepers' association in a State.

Mr. Abbott—Another word on the how. Now if there should happen to be only three people come, then there ought to be in that crowd that came three people that would make the officers. If these gentlemen would go over and say to Jones, "Will you act as president?" and to Smith, "Will you act as secretary?" and another, "You act as another officer." Well, now, you meet at my house, and meet whether anybody else comes or not. Elect Jones, Smith, etc. I will give you a little inside talk. Every reporter is aching for an item as much as you are for a free advertisement. You go over to the newspaper reporter and tell the longest story you can. Two people can have an enthusiastic meeting if you want to. Tell him the names of the officers, and get the names in all the local papers you can, and also have them state that you had an enthusiastic meeting of bee-keepers, and you will have another enthusiastic meeting with a large crowd. You will see the next time there will be somebody there to make a convention.

Mr. Whitney—Mr. Abbott has stated just what I intended to say. They say some people's wit comes too late. In Ohio I went to Mr. Botsworth, and said, "Will you be president of the bee-keepers' association?" He said, "Yes." And I found somebody else that would be secretary, and somebody else that would be some other officer, and we got together and organized. I drew up the constitution and by-laws and there was just enough to make the officers, and it was advertised that at a certain time we would meet at some prominent bee-keeper's place. It was right in the midst of quite a number of bee-keepers. Instead of three members we had 50.

Mr. France—There was a bee-keepers' organization commenced in Grant County, Wis., by E. France and his son, and that's all who were there. We advertised it through the local papers, and those right in our own county didn't even come. In two years we had over sixty. They organized.

Mr. York—I have heard of a father and son having an enthusiastic time, but it was in the woodshed. That's not the case here, perhaps.

(To be continued.)

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Sister Bee-Keepers Ahead in South Africa.

In that new land, South Africa, the sisters do not seem to be crowded to the rear. The British Bee Journal has received the prospectus of the Horticultural and Training College for Ladies at Pinetown, Natal, South Africa, in which Miss Ritchie is to be teacher in the apicultural branch of the college.

A Hard Winter on Bees.

We are having the most severe winter within the memory of any one, and I fear the bees will suffer. To-day the temperature has risen somewhat, so that I dug my bees out of the deep snow, which lay upon the hives to a depth of 2 feet above the covers. The bees are all alive, but must suffer, as they have had no cleansing flight since November. One colony out of the 22 showed some dysentery. I fear there will be much loss of bees this spring because of these conditions. Mrs. C. A. Ball.

Oneida Co., N. Y., Feb. 5.

A Discouraged Sister Revived.

We have had, in northern New York, two exceptionally hard seasons on bees and their owners. Both years, though, mine wintered well, but from the time they were put out on the stands until frost there was scarcely a day when we could work in the yard without starting them robbing. We could not "even up" feed, or make new colonies to supply the spring dwindling, but had to leave them pretty much alone. My apiary is rigged for extracted honey. In the two seasons described our yard dwindled from 81 colonies to 64, and in the spring will, of course, be less.

We gathered last year about 2500 pounds of honey. We usually get between three and six tons from our yard. My other work has so driven me that I could not read the copies of the American Bee Journal thoroughly, and, besides, felt discouraged. However, having time, I got together my Bee Journals for 1902 and 1903, sorted them out, and started in to read them. It was as if scales had fallen from my eyes. I don't believe I will ever again neglect them.

By the way, my bees are "banner bees" so far as crops are concerned. They *always* bring in more honey than my neighbors in this section and Canada.

I read, and study, and watch, and work, more than the above perhaps would imply. (Miss) F. E. Wheeler.

Clinton Co., N. Y., Jan. 22.

The foregoing illustrates the advantage of re-reading, and brings out a point comparatively new. Not only do we gain in information by reading at our leisure what has been hastily read in the busy season, but we are thereby stimulated to greater efforts, and when discouraged revived.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

LOCATING BEES NEAR THE BLOOM.

A very practical problem for those who are about to move, is the one with which Mr. Doolittle wrestles on page 5. About what's the difference between locating right in the good forage and locating 1½ miles away? His experience and observation is that the difference is not very great. I can agree as to the main element of the problem. Given two fields of clover, one right at hand and one 1½ miles away, if the latter is yielding a little better the bees will choose it and neglect the other—and make money by so doing. They seem to esteem three half miles of flight a very small matter—and I guess they are right. Time well spent (quite apart from the journey) in elaborating the nectar. It doesn't follow, however, that two apiaries 1½ miles apart are equal, or anywhere near equal, in value. Necessarily there must be limits somewhere, and each apiary *probably* leaves outside its limits several square miles which are inside the limits of the other. So the theory and a multitude of reports agree that there is sometimes great difference in the yield of two apiaries no farther apart than the distance named. Even a half mile farther in the wrong direction may *prevent bees ever finding* the edge of a region on which they would profitably forage over a good many square miles if they only found it once.

THREE-BOTTOM PLAN TO PREVENT SWARMING.

Hardly know what I do think about the Lyman three-bottom plan to postpone swarming. Guess each will have to try and find out for himself how much it is worth. Mr. Lyman is praiseworthy in the moderation of his claims in regard to it. A postponement of three weeks is worth something—but fellows like me, they'll largely continue to let alone, and—"Hope there won't be much swarming this year." Page 6.

FOUL BROOD INSPECTION IN COLORADO.

Those Colorado boys are great—at showing us the holes in their clothes—when it comes to foul-brood law and inspection. Three inspectors in succession inspect a bad case, and, strange to say, inspection with nothing else done whatever does not cure it. Page 7.

THE GREAT MAJORITY FAVOR SEPARATORS.

In some things we get ahead a little in the course of the years. Lots of writers used to urge and argue that separators could be dispensed with. Now, out of 26 respondents 22 favor them, and all the others are explanatory instead of hortatory in their positions. As between wood and tin, 10 do not express choice; 6 are for tin; and 12 are for wood. Page 10.

THAT CAR-LOAD OF WIVES.

Mr. Hadsell makes a good fight for himself about the car-load of wives. Guess we shall have to admit that if any violation of the proprieties was suggested somebody else tacked it on. Page 11.

PREVENTION OF HONEY GRANULATION.

Honey kept hot for 36 hours very much safer against granulation than that merely heated for a short time. Sounds very reasonable, Mr. Weber. Also, not very easy to get the arrangements to do that safely and cheaply! Page 14.

THE DIFFERENCE IN SUGARS.

Very likely cane-sugar and beet-sugar are practically the same for feeding bees and canning fruit, but a few more experimental tests would not be amiss for all that. Chemical dicta do not make it a thing of course. You may meet a chemist who will tell you that cane-sugar and *maple sugar* are the same—and all common folks of good sense know they are not. In the most important respect of all—the sweetening power—they are not the same. And the judge on the bench, he'll give you a good, healthy fine if you sell them for the same. Chemical analysis does not *at present* reveal any difference; and no one seems to know yet what causes manifest differences in flavor and qualities in different sugars. Wouldn't it be ever so much better if the chemist could humble himself to say as much? Page 21.

DISTURBANCE OF BEES IN WINTER.

With bees, winter disturbance is usually quite harmful—but continuously disturbed is not disturbed at all—pay no attention to it. I was a little surprised that L. C. Root should not be aware of this till he found it out by recent experience. Page 14.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Foundation for Use in Sections.

1. Which kind of foundation do you use in the sections when you use whole sheets, thin super or extra thin?

2. Which way do you cut the foundation? So the cells run vertically, or crosswise? Wisconsin.

Answers.—1. Thin super; when I have tried extra thin the bees made too much trouble when no honey was coming in by gnawing it down. There might not be the same trouble in places where the flow is less uncertain.

2. Vertically; the foundation comes from the manufacturers so as to cut in that way, the sheets being generally 3⅞x15½.

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Getting Queen-Cells Drawn and Grafted.

Last summer I had trouble getting queen-cells drawn and completed. It being said that young bees are desired to do that work. I am going to try to get a colony of cell-builders in the following manner:

During the day, when field-bees are flying strongest, move a colony to a new location, putting another hive in its place, and in it put all uncapped brood and a queen from the colony moved. The old bees that were moved would return to the old stand, and I think the colony on the new stand would contain but few old bees, and when contracted to a few frames would be in condition to build cells when given grafted cups. New York.

Answer.—If you operate as you propose, and use a strong colony, you would have a good lot of bees of the right age for cell-building. But they would not be in the best condition for the work. There would be no honey coming in for some time, and a discouraged lot of bees are not what you want for cell-building. You would get better work to leave the hive on the old stand, taking away queen, brood, and as few bees as consistent with saving the brood. Better still, take the queen with one or two frames of brood and adhering bees for a nucleus, and distribute among other colonies any brood you do not want left. It is not the presence of old bees that does harm, but the absence of young bees.

◆

Black or Half-Bloods—Straight Combs—Holy Land Bees.

1. You will find enclosed, in a little tin box, a few bees which I wish you would give me the description and name of the best you can. I would like to know what kind they are, whether Italians or not. There are several different colors in the same colony, from dark brown to bright yellow.

If you can make out what kind of bees they are, and that they are not as good as pure Italians, what would be the best for me to do, as I produce comb honey only. They are descendants from a swarm my father caught about 10 years ago. They have worked well for me ever since I began, which is three years ago. I began with one colony, and this summer I bought a few, and now I have 18 colonies, and will stay with them as long as I can.

The last season was a pretty good one for bees, but it was hindered a whole lot by rain and cold weather. In May, 1903, we had a frost that killed all the new leaves on the trees, and the spring was cool until late.

2. Is it necessary to have straight brood-combs in a colony that is run for comb honey only?

3. Are the Holy Land bees a different kind from all the others, or are they a substitute under a different name? I would like a description of them, color, etc. MISSOURI.

ANSWERS.—1. The dozen bees received look like black bees with a very little mixture of Italian blood; yet they may be half bloods. If all the bees of the colony are like the ones sent, the colony is not far from being pure blacks. If you have picked out the dark bees, and about half of the colony have yellow bands, then they are half bloods. If they do not do as good work as you like, it will be worth while for you to buy a new queen in the hope of getting better blood.

2. Yes, it is important to have straight combs whatever kind of honey you produce, unless you do not care to handle the frames.

3. The Holy Land is the same as the Palestine, and comes from Palestine. They are distinguished as being very prolific, and for starting and maturing a great number of queen-cells, but for some reason they seem not to be in general favor.

Catnip and Rocky Mountain Bee-Plant Seed.

Where can I get catnip seed, and when is the best time to sow it? Where can I get the Rocky Mountain bee-plant? I am anxious to improve my bee-pasture. MINNESOTA.

ANSWER.—Order from any seedsman or dealer in bee-supplies. If you have no sweet clover in your neighborhood you will likely find it worth more than either or both the ones you have mentioned.

Straw Skep Bee-Keeping—Queen Re-Fertilization.

1. Can you furnish me book references, giving accounts of bee-keeping in straw hives or skeps?

2. What notes have been recorded that queens are fertilized more than once? This is believed by some authorities to be the case. MASSACHUSETTS.

ANSWERS.—1. I do not know of any book now published giving instruction for bee-keeping in skeps.

2. There have been some cases reported in which it was believed that queens were fertilized more than once, but I am sorry to say that I can not refer you to them. It is fair to believe that if such cases do occur the occurrence is by no means frequent.

Dead Brood and Bees—Sick Bees.

1. I had a colony die last week; it left about 15 pounds of honey in the brood-frames, so it didn't starve. Last summer it swarmed once and stored only about 10 pounds of surplus honey. I fear it is foul brood, for I examined the brood-frames and there was about 3 inches around that was drone-cells, and they were all dead in the cells. They were white, and the shape of bees, but they never got out of the cells. The empty combs looked rather glossy, and that glue had an awful smell. I found a whole lot of old bees dead in cells, also; they were stuck in the cells head first, but there were not many old bees in the hive when I found that they were dead. What do you think caused their death, was it foul brood? Can the old hive be used to put a new colony in, or not.

2. Does it hinder the old bees to have enough dead bees in the hive to cause a slight smell? What should be done with a hive like that?

3. Can foul brood be smelled in a hive at this time of the year, or just in breeding time?

4. I have a few colonies that stain the wood of the brood-frames and the bottom-board with big, black specks. Is it a disease, or is it natural? My brother has a few colonies that does the same way. The stains are about a ¼-inch speck, but brown color. My brother claims it is diarrhea, or something like it. What should be done with them? MISSOURI.

ANSWERS.—1. Your finding drone-brood at this time of year rather indicates that it is a case of a drone-laying queen—possibly of laying workers. In that case there would be few bees—just as you found—for no worker-bees have been reared for some time, and the bees would be dying off from old age. Very likely the foul smell was from the mass of dead bees. If this surmise is correct, it will be entirely safe to use the hive and combs for swarms.

2. No great harm will come from enough dead bees to make a slight smell, but the cleaner the hive the better; so it will be well to clean out the dead bees by means of a wire bent at the end, or something of the kind.

3. It is the brood that decays and makes the foul smell, and at the time of the year when no brood is present there will not be the characteristic smell.

4. The spots are deposits of fecal matter from bees having the diarrhea. Look up the subject of diarrhea in your bee-book. The best help for the bees will be a day warm enough for them to fly, so that they can empty their intestines.

Flat Hive-Cover with Closed Air-Space.

Is your zinc-covered hive-cover, with a dead air-space, a flat cover or a gable cover? The dead air-space is entirely enclosed, is it not? NEW YORK.

ANSWER.—The cover is flat, and the air-space is entirely enclosed.

Preventing Swarming in an Out-Apiary.

I keep about 100 colonies of bees all the time, and it is about all I can keep in the home-yard. The demand for my honey is increasing, so I am thinking about starting an out-apiary about 2 miles away. I run all my bees for extracted honey, using the 8-frame Langstroth hive. I always followed natural swarming at home, but if I start the out-yard, I intend to run the two myself, and my whole trouble will be to prevent swarming. I have read everything laid down in the American Bee Journal for the last 10 years, as I have been a subscriber all that time. How would it do to cage the queen near swarming-time? and where would you put her when caged? Would you leave the cage in the brood-chamber? Would I have to keep all cells cut out all of the time, or would it be better to put the bees on starters and put the brood in an upper story, with a queen-excluder between? Or would the "shook" swarming plan be better? Give me your best plan, as I can't afford any swarming in the out-yard. ONTARIO.

ANSWER.—Try all three ways so as to compare them, but I am pretty sure you won't like caging the queen, so you better try that on a very small scale. Leave the caged queen in the brood-chamber, and cut out queen-cells so there will be no possibility of the hatching of a queen. As you are working for extracted honey you can give abundant room, and that alone will prevent most swarming. The second plan you mention is a certain prevention of swarming with some, but not with all. Try that and shaking swarms, side by side, and see which works best. Possible either plan will be a success.

Outdoor Wintering—Shipping-Cases.

1. In wintering bees on the summer stands, what were the longest periods between flights that brought them through in fair condition?

2. Have you any record of successful outdoor wintering when the thermometer went from zero to 18 degrees below as frequently as this winter, averaging about 3 nights per week?

3. Is it of great benefit to have the temperature warm enough for the cluster to change position in the hive without having a flight?

4. What is the object in manufacturers making shipping-cases to hold only 20 sections of the 4x5x1⅜ plain, thus taking 5 cases to hold 100, when 5-row, 5 in a row, would require but 4, and look better, or, if 4-row is standard, it seems possible to get 6 in a row? The size of sections makes no difference in the price in this locality. PENNSYLVANIA.

ANSWERS.—1. I don't know. The question is an interesting one, and I throw it open for our constituency. Has any one ever had a colony come through in fair condition after having been confined to the hive 100 days without a flight, of course, outdoors? If any of you has gone beyond this, please tell us how far.

2. Not in my own experience; but my experience in outdoor wintering is very limited. Just as you put the ques-

tion, there is nothing very difficult, for you say nothing about the length of time of confinement. A colony might go through all right with the thermometer zero to 18 below all winter long, if that colony could have a flight often enough.

3. Yes, it might make the difference between life and death. A colony might in a long spell of cold have all the stores within reach used up, and a spell warm enough to reach out for more would save them.

4. The effort is to have as small a variety of cases as possible, so a case of a given size is made to take more than one kind of sections. You can have shipping-cases made any size you like, but it will cost a little more to have an odd size made.

Perhaps It Was Catalpa Honey.

On page 42, in giving an answer to a question on honey of a peculiar flavor, you asked for help. I have something to offer on the subject, although it may not amount to anything. I have never seen anything about catalpa honey in print. Is it a common or uncommon thing? It is very seldom that catalpa yields honey here, but when it does it is something like the description on page 42. Although I would not call it purple in shade, still I would not know what else to call it.

Once before, in speaking of some honey you liked extremely well, I thought it might be catalpa honey. If I am mistaken in thinking catalpa honey is almost unknown, I will be glad to find out better. MISSOURI.

ANSWER.—I think you are quite right in thinking catalpa honey is little known. Certainly it is "in this locality," although there are very few catalpas here. I hardly think enough honey has ever been obtained from it here to be recognized. You will be doing a good thing if you watch it down closely and tell us what you find out.

Keeping Down Increase.

As I am working for comb honey, how would it work to set the hives close together in pairs, and when there are queen-cells started, shake the bees of both colonies into one empty hive, with 2-inch starters of foundation; set the "shook" swarm where the 2 hives stood, removing the latter to a new stand, and in 8 days shake the bees from one of the hives that were shook before, leaving the other old queen with the last shaken swarm? Or would it be better to kill the old queen and let them rear a new one? Would any of the colonies so treated be likely to swarm? I will be so busy in swarming-time that I cannot devote the time to them that I should. I do not care for much increase, but want strong colonies. I am a beginner, and will be glad to receive any advice you may give. MINNESOTA.

ANSWER.—You would have a powerful colony from uniting the two, but it is not certain that they would store more than if shaken singly, especially if the season is very long, for in about six weeks the united colony will be no stronger than each separate colony would have been. If I understand you correctly, you would unite the parent colonies 8 days later, allowing them one of the old queens. There would be much danger of their swarming. If allowed to rear a young queen, they would not be likely to swarm; but remember, that if you actually *shake* the combs it means injury or death to the young queens in the cells.

Planting for Honey—Clipping Queens.

This has been a hard winter on bees; we are having more snow than we have had for 16 years, at least that is what they say. I don't know, as I am only 15 years old.

I believe that half of the bees in Van Buren County will be, or are, dead. I fed the bees of one of our neighbors last week; he had 9 colonies in the fall, and 6 of them have starved already, and that is the way all around here.

We have had a very poor year for honey. One of our neighbors had 18 colonies, spring count, increased to 22, and got the enormous amount of 200 pounds of comb honey, and half his bees have starved to death now.

I think this is a very poor place to keep bees. If a bee-keeper gets 50 pounds of honey he thinks he has an excellent crop. Fruit is about all that is grown here, and very little clover, and that is mostly the red clover. What I am after is to sow something especially for bees. Catnip is a very good honey-plant. I could get all the seed I wanted, but we have light, sandy soil here, and I read in the American Bee Journal that it does not do well in light soil.

In one of the bee-books (I have "Bees and Honey") it tells of a lot of different kinds of honey-plants.

1. Where can I get the seed or plants of the cleome, mammoth mignonette, motherwort, figwort, and others?

2. I want to set out some basswood, or linden, for honey, but the basswood around here seems to be different from your basswood. We hardly notice them blossom, and the bees don't seem to work at it much. My father and mother came from Germany, and they say that when the linden blossoms there the tree is just white from top to bottom with bloom. I can get what they call European linden from a nursery in New York. Have you ever seen any? If so, would you advise me to try them here?

3. How does the honey-locust compare with the linden in yielding nectar?

4. Do you think it is all right to use comb 4 or 5 years old? Wm. Baker, living ½ mile west, says that when the bee hatches from the cell it leaves a thin skin in the inner wall, which the bees do not clean out, and after a couple of years the cells are shorter and the bees are smaller. I think he is right, for if you take old comb you will find a lot of very thin skins in the bottom of the cell. I have read nothing in the bee books or papers about it.

5. We bought some supers with sections and comb in them, but the comb is one and two years old. Should we give it to the bees again to store honey in? It is just about half built.

6. Is there much use in clipping the queen's wings if I divide the colony and keep the queen-cells out, and look after them about every week? MICHIGAN.

ANSWERS.—1. From a seedsman or some dealer in bee-supplies.

2. Your lindens or basswoods are probably just the same as here, and the probability is that they yield just as much honey. Some years they don't do much. I don't know for certain, but I doubt that the European would do any better. If you have no sweet clover, you would do well to sow some. Don't be discouraged about your locality. Lots of bee-keepers don't average 50 pounds to the colony.

3. Not nearly so good.

4. That subject has been pretty well thrashed out in the bee-papers, and you need not worry about old combs. One European authority took the trouble to measure what old and new cells contained, and he found no difference. I have combs twice as old as you are, and I don't see that bees reared in them are any smaller than those reared in new combs.

5. If kept in good condition I would use it.

6. Yes, indeed; after you have done all that, if your queen is not clipped, some fine day when you're not looking she'll fly away with a swarm.

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A. C. HUNSBERGER.
Northampton Co., Pa., Jan. 29.

A Long-Continued Drouth.

As to the coming season in Southern California, everything points toward an absolute failure. There has been a little over half an inch of rain to this date, and if that makes the heart of a bee-man glad he is easily pleased. I do not believe there will be enough honey gathered here this season to feed the bees.

I recently took a trip to my apiary, nearly 30 miles from this city, and never, since living here, have I seen everything so dried up and parched by long-continued drouth.

The American Bee Journal is a most welcome visitor each week, and the report of the Chicago-Northwestern Convention, in the issue of Jan. 28, is good reading.

ALBERT ROZELL.
Los Angeles Co., Calif., Feb. 4.

Satisfied with Last Season.

I feel very well satisfied with the past season. I started with 9 colonies and increased to 17. I had 700 pounds of comb honey. Spring was very backward, wet and cold. The first swarm came on June 26. I shook five of my colonies into Danz. hives, and am well pleased with them. I took some of my 4x5 sections to the county fair. There was a good display of honey, and some of it very nice. Mine were the only plain sections there. I received 1st on it. On the closing day of the fair, I took my honey to one of the largest stores in Aurora and showed it to the manager; he was very anxious to get the whole crop of section honey. I received $2.60 a case (20 sections), and the shipping-cases returned. They called my attention to some honey they had on the counter, and said they were paying three cents more a pound for mine. Most of the honey I have seen in the stores is just as it came from the supers.

My bees are in the cellar. We have had so far a very mild winter, and very dry; no snow at all. If it takes snow to bring white clover through the winter I am afraid we will be minus the clover. There is a good deal of alfalfa around me, but I have been quite disappointed in it. The bees do not seem to work much on it, but it may be on account of the past two seasons being very wet.

FRANK M. ROSEMAN.
Hamilton Co., Neb., Feb. 5.

Colors and Flavors of Honey.

I notice Dr. Miller's error, on page 71, in attributing my suggestion regarding New Hampshire's sample of honey to Missouri instead of New York.

The error is of no consequence whatever; but the great difference in distance and of climate between Missouri or New York and New Hampshire might be considered as bringing the influence of locality into the consideration. New Hampshire and New York, vicinity of Albany, would not vary much in climatic influences, and therefore the honey from

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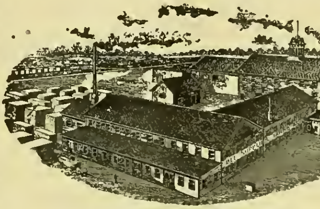

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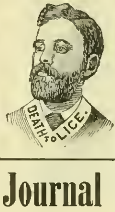
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the same plants and flowers might be considered to be similar in both localities.

White wild aster honey is water-white in color; it is a different shade from that from any of the clovers or from basswood. When the honey is sealed over, the cappings have the slightest shade of lilac or light blue in color. The honey is gathered from the small light-blue wild asters. There is another variety of wild asters, the flowers of which are much larger and of a decided purple color. I have never seen the bees work on this large variety.

Goldenrod honey is distinctly different from aster honey. It is of a beautiful amber color, and very sweet and agreeable. I consider it superior to buckwheat honey in flavor. Buckwheat honey is very much darker than goldenrod honey.

Some seasons we have much more goldenrod honey; but this fall we had none excepting what was gathered during the buckwheat season.

Sumac honey is also of an amber color; but the flavor is not as inviting as that of goldenrod. We sometimes have considerable sumac honey. Stephen Davenport.

Albany Co., N. Y., Feb. 1.

Wintering Bees.

I have been keeping bees two summers, and this makes the second winter I have had to battle. The fall of 1902 I faced the winter with 7 colonies, in what I supposed was wintering condition, but I learned in the spring of last year, when I found that I had only 2 colonies alive, that I did not understand wintering bees very well that time. I bought more bees and read the American Bee Journal, and studied the habits of bees more, and last fall had 14 colonies to winter. During the summer I tried to get the colonies as strong as possible, for I believed then, and *I do now*, that successful wintering depends more on the conditions *inside of the hive* than it does on the *outside*.

I have all 8-frame dovetailed hives except one, which has 16-frames. Some double-walled, and some singled-walled. At the close of the honey-flow I wanted my hives full of honey, and those whose frames were not *full* I fed with sugar syrup until they were *full*.

The double-walled hives I just put the cover on with no packing over the bees at all; two single-walled hives I put winter-cases on, and two I did not, all being on the summer stands exposed to the weather, and although this has been the coldest winter here for 35 years, my bees were in excellent condition yesterday, for, as it was a warm day, I just looked into the hives to see them.

I believe if bees have plenty of stores they will winter just as well on the summer stands as in a cellar, although it is an indisputable fact that the more bees are protected from the cold the less food they will consume.

W. W. Jacobs.

Middlesex Co., Mass., Jan 25.

Management of Swarming.

March 18 my bees were taken from the cellar strong in bees and with plenty of honey in the hives. From April 12 to 15, I lost 9 queens, the most of them being 10 months old; 7 of these queenless colonies reared young queens, and 2 colonies I united with other colonies. On May 3 I hived the first swarm, which was the first of the swarming season. During May I had 22 swarms, and by this time the white clover was in full bloom, and I was anxious to keep the colonies strong with bees. I commenced cutting out queen-cells, but besides its being useless (for as fast as I would cut them out they would build them again), it also made a great deal of trouble taking off one or more supers that I already had on the hives, so I concluded to let them swarm, hiving the swarms in a box made for that purpose, having a 2-inch hole at the top, and both ends covered with wire screen for ventilation. As soon as a swarm was hived in this swarming-box I would carry them to a cool place, keeping them confined until evening, when I would take a colony that had cast a swarm not more than 6 days before, cut out all queen-cells, and put an empty super on top. I would get the box with the swarm, dump them on the frames in the empty super, put on the cover, and when I would look in the morning I would find the queen busy laying.

By this plan I kept strong colonies and busy workers, as their desire to swarm had been gratified; whereas by checking their desire, or in continually cutting out queen-cells, the bees get stubborn, loaf and hang out, and refuse to work. The most of those old, made-new colonies, as I call them, stored about 250 pounds of comb honey. From 36 colonies that I managed in this way, only one attempted to swarm some 4 or 5 weeks later. Care should be taken not to let the swarm work any in the hiving-box, or else there would be fighting, but, by keeping them confined during the day they are homeless, and those in the hive, with which they are to be united, are homeless, and their queen-cells have been cut away, and they will unite without the least attempt at fighting, and catching the queen of the swarm; or any kind of a queen can be introduced in this united colony.

H. B. Stumpe.

Stephenson Co., Ill., Jan. 30.

Hard Winter on Bees.

Ever since Nov. 20 the winter has been hard on the bees. They will all die out if they don't have close attention. The honey crop was light here last year.

G. D. Hawk.

Sullivan Co., Tenn., Jan. 29.

Results of the Season of 1903.

I began the season of 1903 with 85 colonies (that is, I entered the honey-flow), and closed with 131 colonies, all of which I think are alive to-day? I harvested a crop of 2000 pounds of extracted honey and 6000 pounds of comb honey. The extracted honey was nearly all sold as fast as it was ripe, at 10 cents per pound. The comb, or section honey, I sold at 15 cents straight, and all sold except about 1200 pounds. I did not work for extracted honey, but extracted all the sections not fit to grade No. 1 or better—except what our own or a few near neighboring families have used; and, by the way, in cleaning sections quite a good many were marred or broken out altogether. These were cut out, put into jars and filled with extracted honey, *a la* H. H. Hyde, as an experiment. There were some 3 or 4 gallon jars of it, and say! after they had granulated, one would never know that the combs were mixed in, in eating it with bread or pancakes; of course, if eaten alone some of the wax would remain in the mouth. I don't think I should cut out any combs that were not leaking, or otherwise unfit for market, but I certainly would not feel that any great

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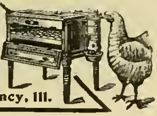

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loss had occurred to those that got marred and were unfit to go to the retail store.

I have 111 colonies of bees in the cellar in apparently first-class condition, however there may be many a slip between now and spring. Twenty colonies at an out-yard appeared all right at the last examination.

The ground has been nearly bare of snow, and only a few cold days, hence a fine winter.

Sioux Co., Iowa, Jan. 25. F. W. HALL.

Experience With Bees.

In the early winter of 1900 we bought 5 colonies of native bees, which we put into the cellar; two of them molded badly and died, leaving a little honey in the hives; the other 3 came out in fair condition, producing 125 pounds of honey, and increasing to 7 colonies, 2 of which starved to death during the winter; the remainder (5) gave us 50 pounds of comb honey, and increased to 10; these we

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Untested	$ .75	$4.00	$7.50	$ .60	$3.25	$ 6.00
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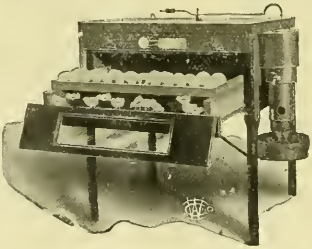

To overcome these objections was a problem that set the Gem Incubator people to figuring. A great many incubator users unite in deciding that the Gem fulfills the necessary conditions.

There are other points of superiority about the Gem that would be interesting to mention, which are taken up in detail in the handsome new catalog. This catalog is free. Write to the Gem Incubator Company, Box 52, Dayton, Ohio, and kindly mention the American Bee Journal.

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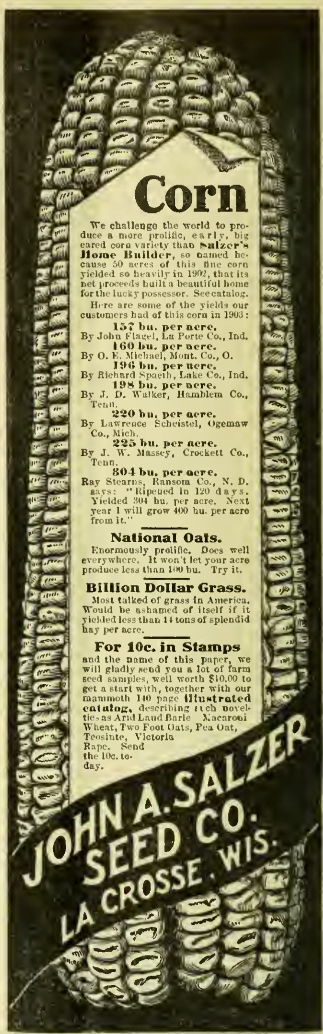

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wintered in a darkened chamber. This seemed to be a good place until about March 1, when the bees became restless and began to crawl out of the hives, many never returning to them again.

We lost only 2 colonies last winter, while several neighboring bee-owners lost their whole stock. Of our remaining 8, 6 were fairly strong, increased to 12, and gave about 100 pounds of comb honey. Eight weeks of drouth (April to June), then 3 weeks of rain, followed by cold and damp weather, seemed to stop the main white clover flow just as the sections were nicely started.

We had 2 prime swarms to unite, and they produced more than half of our crop; which proves to me that the number of colonies is not so important as strength of numbers per colony. HOWARD H. HOUSE.

Oneida Co., N. Y., Oct. 21.

Wiring Frames.

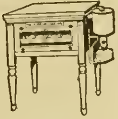
In wiring frames, many of the plans I have tried, but none of them work as well in my hands as the following:

I first prepare a gauge, by using an end-bar with a cleat, or stop-block nailed across one end. On a line through the middle I drive a tack or sharp nail, far enough to make a little prick-mark, one for every wire I want, and where I want the wires. Then on top of this I nail another end-bar to keep the tacks from being pushed back. Then with the stop-block end of the gauge in my right hand, my thumb and finger as guide, the thumb and finger of my left hand as guide on the other end, the frame hung on any convenient corner or projection, the top-bar to the left, I press the guage on the end of the frame, with the stop-block against the lower corner, hard enough to leave little prick-marks on the other end of the same. At each of these marks I drive through from the outside of the frame a No. 18 flat-head wire-nail, long enough to project inside ½ or ⅝ inch. With a small pair of pliers I turn a hook on the nail enough to keep the wire in while stringing it in the frames (a little experience soon teaches which way to turn each hook so the wire will not slip out before you get it properly fastened.) My wire (I use No. 30) is on a spool or reel, fastened so it will unwind, the wire passing under double-pointed tacks, driven out of line enough to give the proper tension; I twist a little loop on the end of the wire and draw out about what I will want for the frame and hook the loop on the first hook, then across the frame horizontally to the corresponding hook on the opposite side and down that side to the next hook, then back to the side I started from, and so continue to the last hook. With the thumb and finger of my left hand I hold the wire in the last hook while with a rather dull jack-knife I cut the wire, leaving an end long enough to twist around the wire outside the hook to fasten it. In using a dull jack-knife to cut the wire I draw on it hard enough to take up the slack which I hold with my left hand until it is fastened. Then turn the frame upright on any smooth surface convenient, and hard enough so the head of the nail will not drive into it, and with a chisel, flat file, or any similar square-edged instrument, I strike down along the wire and drive the hook into a staple, or far enough that the wire cannot get out. In this way I draw the wire to any degree of tension I want (and I like mine pretty tight), the sing of the wire indicating when it is tight enough. Sometimes the wire will kink, and get drawn tight before noticed, when it is sure to break in drawing up, in which case I loosen up the staples, twist a loop in each end of the broken wire, slip one end of a short wire through one loop and the other end through the other loop, and twist them fast, and draw them up close as I can easily with my hands, then draw up the staples again. In this way I can put in 4 wires quicker and easier, and draw them tighter, than by any other method.

If the foundation is fastened securely to the top-bar and the wire pretty taut, I never have any trouble with combs melting down, although I use a ventilated gable made of shakes, that is about as near proof of over-heating as anything I have seen, and has the merit of being very cheap, the cost of material being a fraction under 10 cents even at the present high price of lumber. The making does not count, as I make them myself when I am not otherwise busy.

On page 724, it is said that severe freezing will kill wax-moth and their larvæ if left out in the cold. What would you do if you did not

A HEAT HOLDER



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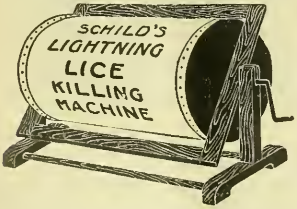
The Lightning Lice-Killing Machine, if you never saw it, you might imagine that it would be necessary to catch the lice first before undertaking to kill them. This, however, would be a mistaken conclusion. The Lightning Machine catches and kills them in one operation. All you have to do is to put the fowls in the machine, six, eight or ten of them at a time, according to size, sprinkle a teaspoonful of powder over them, turn the crank twelve times, and you will have the happiest lot of fowls in the world. The machine is simply a canvas drum, with a crank to turn it, and, of course, a frame to hold it. The price is surprisingly low. Tumbling the fowls over in the canvas drum does not hurt them, not even injuring the feathers of fancy birds, but it makes a hen ruffle up every feather on her body, and that is the time when the powder gets in its work. It goes everywhere, through the feathers and all over the skin, and gets every louse. The process is so harmless that 50 or 60 little chicks can be put through at a time without injury to them. The machine, which is made by Chas. Schild, of Ionia, Mich., is endorsed by the leading poultrymen of the country, and is used on hundreds of poultry farms. Lice are the greatest profit eaters and the worst plague of the poultry world. Mr. Schild's new catalog gives a volume of expert information on lice, explaining all symptoms, and the evils of neglecting fowls. Not satisfied with his sure method of exterminating body-lice, Mr. Schild supplies "Lice Murder"—a powder for the poultry-house, to kill off the mites; as well as other poultry supplies, and lightning grit for poultry. It's a good opportunity, for a postal card or stamp, to learn a lot of things that everyone interested in poultry ought to know. Please mention the American Bee Journal when writing to Mr. Schild.



have freezing weather? Sometimes in low places we have ice ⅛ inch thick, and the tips of the sumac bushes are pinched. Tomato vines, at this writing (Dec. 9) are as green as ever they were, and are likely to remain so. As to freezing such as you are used to, we have nothing of the kind.

Our rains are late this year, one rain in November, and another the night of the 6th, both laying the dust, have been the extent of our rains so far. Last year we hardly averaged ¼ crop, it being cold and foggy during the time we should have had our main honey-flow.
A. J. BURNS.
San Diego Co., Calif., Dec. 9.

Plan of Uniting Colonies.

From 32 colonies, spring count, I harvested, in 1903, 1004 pounds of extracted honey and 614 pounds of comb, which is considered very good for this part of the State. Being afflicted I had feared that the 32 colonies would be more than I could conveniently manage. I doubled up 18 colonies of them, which reduced my apiary to 23 colonies. They were united the latter part of May, in the following manner:

The inferior queen was removed and destroyed 24 hours (preferably in the morning) before uniting. I set the empty hive between the 2 colonies, then proceeded to find the frame with the queen, which was put into the empty hive, then a frame from the queenless colony (having been made so the day before), then another frame from the hive from which the queen was taken, thereby placing them alternately in the new hive, being careful to place the best worker and empty comb in the brood-chamber below, until full, then put on an excluder and above it I put one of the partially empty hives, and put in the balance of the frames, placing alternately as before, until finished. This plan works well when properly handled and will cause but little confusion among the bees, working right along as though they had scarcely been interrupted. It would be well to cut out queen-cells in which now becomes the extracting supers. The above plan works admirably to get rid of inferior queens, and yet not reduce the colonies by the loss of bees.

I increased my apiary from 23 to 31 colonies; they are in fine condition for winter. The past summer was cool and wet, with floods of water at times. There was no basswood nectar, but plenty of clover of various kinds. There were some days so cold, during the midst of the honey-flow, that bees could collect scarcely anything.

The coldest weather here was Jan. 3, 1904—11 degrees below zero, with about 8 inches of snow.
M. N. SIMON.
Wood Co., Ohio, Jan. 6.

Learn Advertising at Home.—The best advertising school is advertising experience, but this comes higher than most of us are able to reach. Yet that need not bar those who are desirous of learning more about advertising from gaining a wider knowledge of this great subject. You may learn about advertising, and what is necessary to make you a successful advertising man, by reading and following the advice given in that bright little magazine, WHITE'S CLASS ADVERTISING. Through its columns every issue you have the experience of those of recognized ability in the advertising world. It is "True blue and pure gold," devoted largely to advertising in class lines having to do with our great American agricultural interests, with special reference to information along farm machinery, live stock, nursery, seeds and poultry lines. It is edited by Frank B. White, who has been at it seventeen years.

Take advantage of the special bargain-day offer—two years, 24 times, 50 cents. Any one number is worth double this sum, in sensible, helpful information, good for every one, but especially valuable to those desiring more light on the advertising subject. Sample copy, 10c. Address, WHITE'S CLASS ADVERTISING, Caxton Building, Chicago, Ill. Or, for $1.25, we will send the American Bee Journal and White's Class Advertising for one year. On this latter offer, send all orders to the Bee Journal office.

CONVENTION NOTICES.

Michigan.—The Northern Michigan bee-keepers will hold their annual convention March 30 and 31, 1904, in the Moutague Hall, 127 Front St., Traverse City, Mich.
GEO. H. KIRKPATRICK, Pres.
Rapid City, Mich.

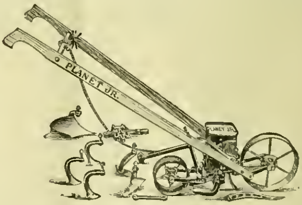
Kansas—There will be a meeting of the Arkansas Valley Bee-Keepers' Association, at Hutchinson, Kans., Mar. 5, at 10 a.m. All bee-keepers and others interested are respectfully invited to be present. FRED WILBER, Sec.

Utah.—The spring convention of the Utah Bee-Keepers' Association will be held April 5, at 10 a.m. and 4:30 p.m. Among other important questions to be considered will be the World's Fair, our State Fair, and the Portland Fair of 1905. We also desire to formulate some plan, if possible, to further increase the fraternal interest for the mutual benefit of our bee-keepers. We cordially invite all bee-keepers to be present. We also invite them without delay to send in their views on these and other topics. The convention will be held in the City and County building, in Salt Lake City.
Salt Lake City, Utah. E. S. LOVESY, Pres.

Here's Its Name
THE
IOWA
Inside - Its Fame

Cover design of the free catalog of the Iowa Incubator Co., of Des Moines, Iowa.
Please mention Bee Journal when writing.

The Planet Jr. No. 4 Combined Drill is perhaps the most popular of all the famous Planet Jr. line of garden-tools. It is called a Drill for brevity, but it is much more comprehensive. The gardener finds in it almost every tool for hand-work he needs. As a seeder, it drills and also plants in hills with greatest accuracy, and it may be set so that they shall be set 4, 6, 8, 12, or 24 inches apart, as desired. It is but a work of a moment to remove the seeder attachments and substitute the pair of hoes, the three hollow steel teeth or the plow, and you have an ideal wheel hoe, cultivator or plow, as the case may be. Its handles adjust to suit either man or boy. Simply raising the handles cuts off the flow of seeds instantly. As a hoe or cultivator, it may be used either in the furrow or, by means of an extension piece, when the plants are small you may hoe or cultivate both sides of the row at once. With all its width of duty, it is most simple and it is most durably built. An idea of its real genius cannot be conveyed in so small a space as this. It is advertised elsewhere. S. L. Allen & Company of Philadelphia, Pa., the manufacturers, will gladly send catalog fully describing. It is a good investment to send a postal for it. When writing, please mention the American Bee Journal.



What Yon Yonson Thinks

About the Prices of Bee-Supplies.

In Merican B. Journal, page 739 (1903), Mr. Baptist Beck he say he tank da bee-keepers is da milk-kow of da supply dealers. Vel, ay hoap Mr. Beck don't vas got some patent on das idea. He musta be some plenty funny babtist feller. Mebby da feller vot babtized Mr. Beck don't vas got som plenty good scald on him, and dun owful poor yob.

Vy for you don't mak yours own hives, den you be yours own milk-kow, an if da price don't sute, or da hives don't fit, you can kick da kow all over da farm? An it don't matter to any von elst if you fix da price any place between 50 cents an da kow-stable. An if you don't vas git very much hunny youst rais da price on hives, an you be sure to mak plenty monny.

Before aye bi all ma hives, but now dom iss too hi. But it don't vas any law past yet vat say Yon Yonson haf to bi any boddys hives, an so aye goan to mak for self. For hives vot cost more as von dollar aye can mak for little as tuice so much; an da hives vat ay mak, dom fit yust quvicker as nutting; an for little as 50 cents ay can mak plenty good hive, but ay kan't for some plenty very vell to mak seckshuns, an frams, an fences, an now da price vas git plenty hi so vot you tank ve goan to du bout das bissnes? It don't vas goan to du any good to sit on da fens an cri. Vy for ve don't git togedder an mak som factory of ours own, den ve can du ours own milken? Da N. B.-K. A. iss so strong now, an iss grow plenty fast, an if ve tak fu dollars each ve can mak som factry up in da nort to mak sections, an fondation, an da hives ve can mak ours selv. If da N. B.-K. A. vould tak holt an bild factry den every boddy vud youst run over each odder to yoin dem selv into das N. B.-K. A., an quvicker as no time ve vuld hav tventy-fife tousan members. Now, all you fellers vat hant vos yoin its, better you don't sleep a vink til you send yours dollar to be member.

But ve shud not for git dat ve owe da supply dealer more as nobody elst, for dom hav help to advance bee-keeping, but da supply dealers shud remember vat dom owe us, caus ve bi deirs supplies. And ve shud be brodders, but every boddy know da suppli dealers is in a trust, an Yon Yonson don't vos trust any trust, an ay tank it be sum purty good ting to yust mak da trust stan on da flor an studdy deirs lesson til dom promis to be good. Dom say dat lumber has vent up. Vel, ay ges so, but ay haf bi lots of lumber, an ay know lumber don't vas yump half so fast as hives. Bees vax, it don't vas vent up, but fondation it yump up lak a yack-rabbit going uphill. No, it don't vas because money (da root of all evil) is got da trust by da nose; an' monny is trying to lead som offle good mans into da path of sin. But all roads vas hav an end, even if dom is krooket. Any von vot charg more as an onest profit dom do 'rong, an dom goan to suffer for deirs own sin. But da supply mans dom has got more smart dan ve, an it is our folt if ve let dom rob us, caus dom haf rite to charg vot dom vant to; but ve don't hav to bi, so if supplies are hi don't blam any body but yours self.

YON YONSON.

Young Orchards and Rabbits.—The season is now at hand when young orchard trees demand protection from rabbits, and we have noticed lately articles in two or three of the agricultural papers recommending the old preventive of rubbing blood or liver over the trunk and lower limbs of the young orchard trees. We have, however, found this method very unreliable, for if the rabbits have already had a taste they will usually again commence working on the trees as soon as the smell of blood is gone, which is not very long, especially should there be rains. Some 25 years ago, when we were just starting in the nursery business, we had a fine block of about 20,000 apple-trees on a piece of bottomland in the bend of the creek (a good place for rabbits, but a poor place for trees); these were attacked and we did the rubbing act to perfection, using blood and liver, but they took the entire block before the winter was over. Subsequently we made up about 150 box-traps, and each season in September we place them about the nursery. If trees at any place showed rabbits' work we would put a dozen more traps in that locality and we soon caught the varmints, and the trouble would cease; but even this method must have careful attention. At present, several of the catalog nurserymen advertise wood-veneer to protect trees, but our experience has not been satisfactory with these. Some years ago we used several thousand in our Colorado orchards; they would warp and split in time more or less, and have sometimes injured trees by chafing. We find that the tarred building-paper gives us the best results. It is cheap and can easily be put on. The roll should be made four to six inches in diameter so as to leave a good air-space next to the tree. This is also a good preventive for borers. We will not catalog wood-veneers this season.—J. A. Gage, of Gage County Nurseries, Beatrice, Nebr. Send for free catalog, and please mention the American Bee Journal when writing.

The Reliable Catalog.—The Reliable Incubator & Brooder Co., Quincy, Ill., U. S. A., have just issued their 20th Annual Catalog, and as usual with this Company, it is a most elaborate one. The Reliable people are nothing if not unselfish. They do not believe their yearly catalog should be entirely taken up by themselves in advertising their goods, but sufficient space is given to the description of their Incubators, Brooders and Supplies, and the remainder devoted to general information on poultry subjects, making it a most valuable book for any one who raises poultry. It gives many practical pointers that would require years of experience to acquire. Every reader of this paper should have a copy. Write for one, and kindly mention the American Bee Journal when writing.

Wholesale Honey.

We need a few thousand pounds more of Comb Honey for our trade in St. Louis and Chicago. Any person, any where, who wants to cash up his Honey Crop at a wholesale price, we would be pleased to hear from, with complete description and lowest price delivered to their depot. West of Kansas City and Omaha it should be in car-lots.

THOS. C. STANLEY & SON, Manzanola, Colo.

Please mention Bee Journal when writing.

WANTED! FANCY COMB HONEY

In no-drip shipping-cases. Also Amber Extracted in barrels or cans. Quote your best price delivered Cincinnati. The Fred W. Muth Co.

32Atf Front and Walnut, CINCINNATI, OHIO

Please mention Bee Journal when writing.

GOOD BEE-HIVE CHEAP!

Called the poor man's hive. Either 8 frame or 10. Sections sold at last year's prices. Full line of SUPPLIES. Subscription to bee-journals with orders. Send for list.

R. D. 3. W. D. SOPER, Jackson, Mich.

3Atf Please mention the Bee Journal.

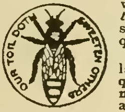
Please mention Bee Journal when writing

WE SELL ROOT'S GOODS IN MICHIGAN

Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Four percent off for cash orders in December.

M. H. HUNT & SON,
BELL BRANCH, WAYNE CO., MICH.

A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.


OUR TOIL DOTH SWEETEN OTHERS

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10c; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

For Sale 1000 lbs. White Comb HONEY; 1000 Extracted.

7A2t R. D. 3. W. D. SOPER, Jackson, Mich.

Please mention Bee Journal when writing.

HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, Feb. 8.—The demand is better for all grades of honey than at any time since the beginning of December of last year. Stocks are now being reduced, but at the same time prices are easy. Many have had it so long that they are anxious to make sales. No. 1 to fancy white comb honey sells at 12@13c; amber grades, 10@11c; dark, etc., 9@10c. Extracted, white, 6@7c, according to quality, kind and flavor; amber, 5@6c. Beeswax, 30c.

R. A. BURNETT & CO.

CINCINNATI, Feb. 8.—There is a fair demand for honey, but nearing the end of the season for comb honey, with large supply, has pressed the prices; fancy white, 13@14c; amber, in barrels, 5¼@5¾c; in cans, ½c more; alfalfa, water-white, 6@6½c; fancy white clover, 7½@8c. Beeswax, 30c.

C. H. W. WEBER.

PHILADELPHIA, Feb. 8.—There has been a decided decline in comb honey since last quotations. Bee men who have little lots held back and are afraid they can't dispose of it before warm weather, are shipping it in, selling at any price they can get, breaking the market decidedly. We would quote fancy white at 14@15c; No. 1, at 12@13c; amber. 10c. Extracted, white, 6@7c; amber, 5@6c. Beeswax, 31c. We are producers of honey and do not handle on commission.

WM. A. SELSER.

CINCINNATI, Feb. 16.—The honey market at present is dull, and lower prices would not induce sales, which, no doubt, is due to the continued cold. We hope to make a better report when the weather moderates. We offer our amber extracted honey in barrels at 5½@6½c, according to quality; white clover, 6½@8½c. Fancy comb, at 14@15c, in a small way. Beeswax, 30c.

THE FRED W. MUTH CO.

ALBANY, N. Y., Feb. 1.—Honey demand very light. Prices of comb honey are largely now what the buyers will offer—from 10@15c. We look for better demand when weather is warmer. Extracted doing some better at 7c for white, 6½c for mixed, and 5½@6c for dark and buckwheat. Beeswax, 28@30c.

H. R. WRIGHT.

BOSTON, Feb. 9.—There is little change to note in the honey market. Strictly fancy Eastern honey is scarce. Western honey will not bring as much here. We quote fancy white in glass-front cases at 16c; No. 1, at 15c. Supply is ample, and demand light at this time. Extracted, water-white, 8c; light amber, 7@8c; with but little call for dark Florida.

BLAKE, SCOTT & LEE.

KANSAS CITY, Feb. 9.—Another cut in the price of comb honey since our last quotations. Strictly No. 1 white comb was sold at $2.25 per case of 24 sections. We are holding our stock at $2.50, with the hope of a better market, but if shipments continue, we will have to let go with the rest. The supply of extracted is large, and the demand light, at 6½@7c for white, and amber at 5½@6c. Beeswax in demand at 30c.

C. C. CLEMONS & CO.

NEW YORK, Dec. 4.—Comb honey is arriving in sufficient quantities to supply the demand, and, as to the quality, most of the white honey seems to be off color, more or less. We quote fancy white at 14c; No. 1 at 13c; amber, 11@12c; and buckwheat, 10c. Extracted, light amber, at 6c; white, 6½c; Southern, 55@60c per gallon; buckwheat, 5½c. Beeswax, 28@29c.

HILDRETH & SEGELKEN.

SAN FRANCISCO, Feb. 3.—White comb, 1-lb. frames, 12½@13c; amber, 9@11c. Extracted, white, 5½@6c; light amber, 4½@5c; amber, 4@4½c; dark amber, 3½@4c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

The same quiet condition previously noted is prevailing in the honey market. In quotable values there are no changes to note, but large sales are not possible at full figures. That the coming crop in this State will be light seems to be now very clearly foreshadowed.

HONEY AND BEESWAX

When consigning, buying or selling, consult

R. A. BURNETT & CO.,
199 SOUTH WATER ST. CHICAGO, ILL.

Please mention Bee Journal when writing

The Best Bee-Goods in the World....

are no better than those we make, and the chances are that they are not so good. If you buy of us **you will not be disappointed. We are undersold by no one.** Send for new catalog and price-list and free copy of THE AMERICAN BEE-KEEPER; in its thirteenth year; 50 cents a year; especially for beginners.

—THE—

W. T. Falconer Mfg. Co.,
JAMESTOWN, N. Y.

W. M. GERRISH, Epping, N.H., carries a full line of our goods at catalog prices. Order of him and save the freight.

I. J. STRINGHAM, 105 Park Place,
NEW YORK

Manufactures and carries in stock every article a bee-keeper uses. BEES AND QUEENS IN SEASON.
Apiaries—Glen Cove, L.I. Catalog free.

ST. LOUIS, 1904.

Bee-Keepers' Supplies Galore.

Catalog Free.
A No. 1 Smoker by mail, $1.

Bees, Honey and Beeswax bought and sold for cash.

LEAHY MFG. CO.,
1 ALTA SITA, EAST ST. LOUIS, ILL.

Bee=Supplies!

G. B. Lewis Co's Goods.

Don't Wait Any Longer to Buy.
Big Discount for Orders Now.

Write us to-day and say what you want, and get our prices. New catalog of 84 pages; it is free.
We also handle the famous
Hoosier Incubators and Brooders.

C. M. Scott & Co.
1004 East Washington Street,
INDIANAPOLIS, IND.

Special Notice to Bee-Keepers

BOSTON

Money in Bees for you.
Catalog price on

ROOT'S SUPPLIES.

Catalog for the asking.

F. H. FARMER,
182 Friend St., Boston, Mass.
Up First Flight.

BINGHAM'S PATENT Smokers
25 years the best.
Send for Circular.
25Atf T. F. BINGHAM, Farwell, Mich.

Please mention Bee Journal when writing.

27th Year **Dadant's Foundation** 27th Year

We Guarantee Satisfaction. What more can anybody do? BEAUTY, PURITY, FIRMNESS.
No SAGGING, No LOSS. PATENT WEED-PROCESS SHEETING.

Why does it sell so well? Because it has always given better satisfaction than any other. Because in 26 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material.
We sell the best Veils, cotton or silk.

Bee=Keepers' Supplies
OF ALL KINDS.

Langstroth on the Honey-Bee—Revised
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

DADANT & SON, Hamilton, Hancock Co., Ill.

Your Bees Won't Sting You
IF YOU GIVE THEM LEWIS' GOODS.

LEWIS
WATERTOWN, WIS.

OUR NEW CATALOG 68 PAGES
—IS NOW READY—

Everything the Bee-Keeper Needs.

G. B. Lewis Company
Watertown, Wis.

Queen-Pointers—Bee-Enemies.
PROF. A. J. COOK.

Comb or Extracted Honey?
C. P. DADANT.

AMERICAN BEE JOURNAL

WEEKLY—$1.00 A YEAR.
Published by GEORGE W. YORK & CO., 144 & 146 E. Erie Street.

44th Year. CHICAGO, ILL., MAR. 3, 1904. No. 9.

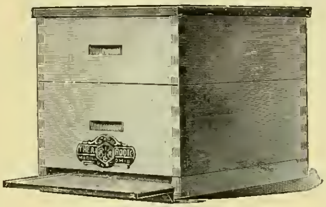
WEEKLY

THE HOME OF THE HONEY BEE

APIARY OF J. W. CULVEY, OF LA PORTE CO., IND.
(See page 164.)

THE VOICE OF THE PEOPLE

DANZENBAKER'S HIVE.


THE A. I. ROOT CO.
MEDINA, OHIO

MORE HONEY. BETTER PRICES.

WE HAVE TOLD YOU SOME THINGS

—ABOUT THE—

DANZENBAKER HIVE

FOR COMB HONEY.

NOW SEE WHAT OTHERS SAY.

MORE HONEY.

UNION BRIDGE, MD. Feb. 9, 1901.

The A. I. Root Co., Medina, O.

Gentlemen:—I saw in a recent issue of your paper that you have a department called "Reports Encouraging." I shall send you my report.

I use the Danzenbaker hive and will give you report of the same, as the few dovetailed hives that I use do not compare at all with the Danzenbaker. One colony gave me over one hundred pounds No. 1 white honey and the rest averaged about sixty, with an increase by natural swarming of one hundred per cent. A friend of mine who uses all sorts and kinds of hives in his apiary succeeded in making scarcely enough honey to pay for the foundation used in the sections. This was about two miles from my apiary. Long live the Danzenbaker hive! It is just the thing for this locality.

Yours truly,
J. B. HOLLOPETER.

MALLET CREEK, O., Sept. 25, 1902.

I have now 250 colonies of bees, of which 170 are in the Danzenbaker hives, and shall have all my bees in Danzenbaker hives next spring. During this past poor season, 30 or 40 of the colonies in the Danzenbaker hives gave over 100 lbs. surplus. On the average I get more than double the amount of honey from these colonies that I do from those in the old chaff hives. With a 7-inch telescopic cover, the Danzenbaker hive winters the bees better than the chaff hives.

VERNON BURT.

MORE HONEY AND BETTER PRICES.

I have used both square and tall sections in all my apiaries five years, and know from practical experience that it will pay to discard the 4¼ sections, and use only 4x5 sections, and the Danzenbaker hive with the fence separator. They have made enough more this season in the same yard to pay for the hives. I have made *more money* this season per hive than I have any previous year in my 15 years of bee-keeping. Fifteen of my strongest Danzenbaker hives made me a ton of honey. When it comes to sales I get more for the 4x5 sections, and have no work in cleaning them. I ship them as I take them from the super. This is not the case with the 4¼ section. I make honey to sell, and anything that sells the best, and for the most money is what I want out of the bee-business.

S. D. MATTHEWS.

In Gleanings, p. 931, Dec. 15, 1899.

MOUNTAIN VIEW, N. J., Oct. 6, 1897.

I have run my hives largely with the Danzenbaker sections this year, and shall increase my facilities for the Danzenbaker output next year. I sold all my fancy clover in Danzenbaker sections, glazed, to two fancy grocers in New York, at 20 cts. a section; were retailed at 25 cts. each. My 4¼ sections, unglazed, sold to grocers at 12½ to 13 cts., retailing 16 cts. I furnished cartons with the 4¼, which cost nearly as much as glass.

B. F ONDERDONK.

BETTER PRICES FOR DANZY. HONEY.

ROCK VALLEY, N. Y., Feb. 22, 1901.

My bees gathered no surplus after July 1. I had only 1200 lbs., but I obtained a fancy price—15½ for "Fancy" and No. 1 white, and 14½ for No. 2 here at my station for all the Danzenbaker 4x5 plain sections, used on your hives, while I got only 14 and 13 cts. per lb. for the 4¼x4¼ square sections, and I consider that much difference is worth looking after—don't you? The Danzenbaker hives doubled up, two brood-chambers, are in fine condition, even better than my double-walled hives. I intend to build a bee-cellar and work off my double-walled hives as fast as I can, and get the Danzenbaker hives.

Very truly yours,
J. L. HAIGHT.

It is not claimed that so large an advance in price as is mentioned above can usually be obtained for honey in Danzenbaker sections, but because it is more uniformly fancy grade, and of general better appearance it commands the highest prices and a more ready sale in a dull market than ordinary honey.

A RECENT ORDER.

INDIANAPOLIS, IND., Feb. 3, 1901.

The A. I. Root Co., Medina, O.

Dear Sirs:- Please ship to me as soon as convenient: 500 Danzy. AD64M hives.

Yours,
WALTER S. POUDER.

(This is in addition to all other orders.)

64-PAGE BOOK.

Mr. Danzenbaker's little book, "Facts About Bees," containing 70 pages, giving full particulars regarding this hive and system, is indeed full of facts. If one follows the directions clear through, he is sure to produce a strictly first-class article of comb honey, providing of course there is any honey to be had. This unique little book will be sent free to all who apply for it.

Bee-keepers are raising honey for the money there is in it, or for the pleasure they get out of it. It is conceded by all who have tried this system that it is highly profitable. Reading over letters from the users of this hive who tell of securing large crops of honey almost free from propolis makes us think that the bee-keeper who is in the business for pleasure would be highly gratified with the hive also. What is more satisfying than to take off well-filled supers of snow-white sections free from the propolis that is so often found on sections in cases that are poorly constructed and adapted for the production of a fancy article?

SPECIAL NOTICE.

The great popularity of the Danzenbaker hive has brought the shallow brood-frame and the tall plain sections into prominence. It must be remembered that no other hive contains the essential features of the Danzenbaker. The success of this system depends on having everything just right, so you should place your order for the Danzenbaker hive with our main office, or any of our branches or regular agents.

THE A. I. ROOT COMPANY,

BRANCHES: **Main Office and Works, Medina, Ohio, U. S. A.** **BRANCHES:**

CHICAGO, ILL., 144 East Erie St.
MECHANIC FALLS, ME.
SYRACUSE, N. Y.
PHILADELPHIA, PA., 10 Vine St.
ST. PAUL, MINN., 1024 Miss. St.
HAVANA CUBA, San Ignacio.
San Antonio, Tex., 438 W. Houston.
Washington, D. C., 1200 Md. Av., S. W

(See list of Jobbing Agents in American Bee Journal, Jan. 7, page 2.)

ESTABLISHT IN 1861

AMERICAN BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

GEORGE W. YORK, Editor. CHICAGO, ILL., MAR. 3, 1904. Vol. XLIV—No. 9.

Editorial Comments

"No Money in Bees"—Why?

About a month ago we received the following letter accompanied with one dollar for subscription:

> GEORGE W. YORK & Co.— LA SALLE Co., ILL.
>
> *Dear Sirs:*—There is no money in bees at this time. I have 165 colonies, and a ton of comb honey on hand. From 8 to 10 cents a pound for honey does not pay with sections in the flat at $5.00 per thousand. I am going out of the bee-business.
>
> Do not forget to stop the Bee Journal when this dollar is used up.
>
> Yours truly, "SUBSCRIBER."

It seems to us that something must be wrong with the bee-keeper himself, or his management, when he can not succceed with a large apiary, especially in as good a season as was that of last year. "Subscriber" says he has still on hand a ton of comb honey, which ought to bring in more money than would pay for all the time and work spent with his bees all last season. And if his honey is all right there is no good reason why he should not ship it to some distant market, and get more than 8 or 10 cents per pound for it.

We are not personally acquainted with "Subscriber," but we dare say he is hardly an up-to-date bee-keeper, or he has not profited by what he has read in the American Bee Journal. Very likely he has been too busy with other work, and neglected to open the copies of the Bee Journal as they came to him from week to week. We have known of just such cases. Undoubtedly, had he read carefully all that has been published as long as he has been taking it, he would know just how to put up his comb honey, and market the same in a way that would pay him as well as or better than any of his other business. He is not so very far from the Chicago market, and had he sent his honey here early last fall it probably would have netted him 13 or 14 cents per pound.

It seems to us that if we were the owner of an apiary of 165 colonies, in as good a locality as "Subscriber" lives, we would certainly make it pay in dollars and cents—unless, of course, the seasons were against us.

"Subscriber" says that comb honey does not pay at 8 to 10 cents per pound when the sections used cost $5.00 per thousand. Of course, he would not have said that had he given the matter any thought. A thousand sections weigh about 70 pounds, and they are usually sold at the same price per pound as the honey which they contain. At 10 cents a pound he should get about $7.00 for his 1000 sections, which cost him $5.00, making a clear profit on the sections alone of about $1.75 per thousand, after paying the freight charges on them.

Of course, we shall not forget to stop sending "Subscriber" the Bee Journal at the end of the time paid for. We fear he is one who does not know how to get his money's worth out of a bee-paper, when the fact is that there is scarcely any single copy of any bee-paper published that is not worth the whole year's subscription price to any bee-keeper who really desires to be successful with bees. A person who succeeds in any line must be determined to succeed. He must bend his every energy to the work. He must put his whole heart and life into it. He should read about what successful men have done. It does not pay, in these days, to try to learn everything by one's own experience. Competition is all too strenuous for that. It takes too much time to travel over the long road that others have gone, and it is not necessary, for by reading what they have written one can save himself many an expensive experience by knowing in advance just what the result will be.

There are many bee-keepers who are very successful with their bees. They not only read all the bee-papers, but profit by their reading. Such persons can not afford to be without everything that is published on the subject of bee-keeping. They want to know all the short cuts to success. The only way to find them is to read about them as they are published from time to time.

Another very important matter for every honey-producer is to watch the market reports on honey. Also, it would often pay them to advertise in the bee-papers, telling just what they have on hand in the line of honey. Most of the dealers in honey read the bee-papers, and are constantly wanting to know where honey can be bought. Those dealers that have spent years in building up a business in honey have many customers that are willing to pay a good price for the right kind. But never ship very much honey at one time to a new firm of honey-dealers. While they may be all right financially, they have not had time enough to work up a paying trade in honey. In all the Chicago market there are not more than three or four firms that can do much in handling honey in a wholesale way. Several of them have been in the business a great many years. We know of some instances where commission men have received shipments of honey, and in order to dispose of it have accepted just about what they were offered for it. Of course, they were only looking for their commission, and were not very particular whether they got a cent per pound more or less for the honey; while that one cent per pound might make quite a difference to the honey-producer.

We were talking with one of these latter commission men the other day. He said he had on hand about a ton of very nice comb honey. He had sold about 1000 pounds of the lot to one of the regular honey commission men for 11 cents per pound. No doubt the dealer who bought it sold it for 13 or 14 cents per pound. Now, if the producer of that honey had shipped it to a regular honey-dealer in the first place *he* would, of course, have received that 2 or 3 cents per pound more for his honey.

It is like this: Suppose when we were in the honey-business a farmer had shipped us several hundred bushels of potatoes. We were not in the potato-business, so, of course, we could scarcely handle a shipment of potatoes at all. We would have no customers for potatoes We were in the honey-business, and had, of course, a great many customers for honey. Those who read the American Bee Journal regularly will readily see the point that we are trying to make. It is almost useless to ship honey to any dealer who does not make a speciality of honey. Honey is so different from any other article of general trade. There are very few dealers outside of the regular honey-dealers who know anything about honey. They would be sure to store honey during the cold weather in the coldest room they could find. They know no better. Just as there are thousands of housekeepers who think they must keep in an ice-box or refrigerator the little honey they buy at the grocery from time to time, until it is used up.

So be careful to whom you ship honey.

It seems we have gotten quite a distance from the text we started out on, but we feel that what we have written will be helpful if it is heeded.

We hope before his subscription has expired, that "Subscriber" will decide to continue taking the Bee Journal, and try to profit more from reading it in the future than he has in the past. Our principal aim is to make the old American Bee Journal a real help to its readers.

Miscellaneous Items

The Ohio Foul Brood Bill, we learn from Mr. Fred W. Muth, has passed the House of Representatives without a single vote against it. This is very encouraging, indeed. We trust the Senate will do as well by the Ohio bee-keepers as did the House.

* * *

Dr. G. P. Hachenberg, of Austin, Tex., died Jan. 8. He was 80 years old. He was an occasional contributor to the columns of this journal years ago. He served as a surgeon in the Civil War. "In 1864 an article on telephony, written by him and published in Godey's Ladies' Book, gained him a world-wide reputation, containing as it did the first plans for the practical application of the principle."

* * *

Mr. C. H. Gottsch, of Long Island, New York, sent us the following item dated Feb. 19, taken from the New York World:

> COLD KILLING THE BEES.—Honey which is an important product of farms in all parts of New Jersey, promises to be scarce. The bees live during the winter months on honey stored in surplus boxes. The unprecedented cold weather has frozen this honey, and owing to a lack of nourishment the bees have died by the thousands.

* * *

Mrs. J. Q. Smith, of Lincoln, Ill., passed away a few days ago. She had been a great sufferer for some time. She leaves a husband and two sons to mourn their loss. Mrs. Smith was a member of the Methodist Episcopal Church, Daughters of Rebekah, and Woman's Relief Corps. She was a model wife and mother, a consistent Christian, and a valuable friend and neighbor. Her husband is the well-known President of the Illinois State Bee-Keepers' Association, and also State foul brood inspector. The heartfelt sympathy of all is his in his great bereavement.

* * *

Mr. W. A. Pryal, of San Francisco Co., Calif., writing us Feb. 15, had this to say about the rainfall in that part of the State:

> DEAR MR. YORK:—Talk about dry years in this part of California! Why, bless your heart, it now looks as if we shall have to pray for the rain to stop. Less than a fortnight ago prayers were being offered in the churches for rain. It came—in this end of the State, and continues to do so. About the middle of last week it rained good and hard for 27 hours at a stretch. To-day it has rained more than six hours, and it is still coming down. I trust the storm will extend southward where it is badly needed. W. A. PRYAL.

We certainly join with Mr. Pryal in the hope that the abundance of rain may also visit Southern California where it is needed so much.

* * *

Mr. Jay Smith, of Knox Co., Ind., suggests the following on hatching hen's eggs over bees:

> AMERICAN BEE JOURNAL:—I note that some have had trouble in hatching hen's eggs over bees. It must have been because their special strain of bees were non-sitters. This is the way it should be done:
>
> Make some queen-cells on the Doolittle plan, using the end of a pitchfork handle for the purpose. Then put in the hen's egg and insert this in the hive. When it hatches the bees will feed it liberally with royal jelly, and you can raise a fine hen that will lay from 2000 to 4000 eggs per day.
>
> I see Mr. Kane had a failure. Don't you think *fowl* brood was the cause? JAY SMITH.

No, it was the whole scheme that was *foul!*

* * *

Gus Dittmer's Loss by Fire.—On Feb. 24 we received the following from Mr. Dittmer:

> AUGUSTA, WIS., Feb. 23, 1904.
>
> FRIEND YORK:—I met with a terrible misfortune last Saturday (Feb. 20) in the burning down of my factory and office. Over 8000 pounds of beeswax went up, 6000 of which was comb foundation ready for the market. I shall have a very substantial loss, as the insurance will not cover it. My friends, however, have turned up in a way that has cheered and encouraged me in every possible way.
>
> What I need first is lots of beeswax. Can you do anything to help get it for me?
>
> I have lost most of my papers, etc., including my mailing list. All of my Saturday morning's mail, except the remittances, was burned. I have no way of notifying any one, as the names and addresses are lost. I want to hear from every one who has an order with me, or who has written me any mail that should have reached me Saturday, or any one looking for an invoice, or letter of any kind from me. I also want a card from every one of my friends and patrons, and from any one who has been receiving my catalog, for the reason that I have lost my list of customers. I also want all my friends and patrons to help out by giving me a chance to get started again, and not crowd me for comb foundation. As soon as we are ready, we will, if necessary, run night and day until we catch up.
>
> I would like to have orders for goods to come right along, as if nothing had happened. We can furnish everything but comb foundation the same as before.
>
> I shall have a two-story house, 24x36 feet, moved here this week yet, and next week a big crew will fix it up for the machines, engine, etc.
>
> Any one expecting orders or invoices in response to mail received since the fire must not be impatient because they are kept waiting.
>
> Our catalogs were burned, but we will have a new supply very soon. Yours truly,
>
> GUS DITTMER.
>
> P. S. Another thing: I want every one who owes me to write me at once. G. D.

Mr. Dittmer's many friends will regret exceedingly to learn of his loss by fire. Having passed through a somewhat similar experience a little over three years ago, we know how to sympathize with him; but we know Mr. Dittmer well enough to assure everybody that he will come out all right. He is not a man that is easily downed, no matter what the occasion may be.

We hope that all who are interested will read carefully what he has written in the above letter, and try to comply with his requests. Surely all will do what they can to help out Mr. Dittmer in his present trying condition, especially all those who owe him anything will pay at once. There is nothing like having ready money to start with after such an experince as Mr. Dittmer has passed through. He deserves any and all kinds of help that can be extended to him.

* * *

The Apiary of J. W. Culvey, of Laporte Co., Ind., appears on the first page this week. He writes us as follows about it:

> FRIEND YORK:—I had 132 colonies when the picture was taken, and have at this time 130. I run for both comb and extracted honey, using the 8-frame dovetailed hive, but I think it is too small. As I make my own hives I will make 10-frame ones this winter.
>
> The hives in the yard are set in rows 12 feet apart one way, with entrances facing each other; then another row 2 feet apart, back to back, and 3 feet between the hives, as shown below:

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> I have a home market for all our honey at 15 cents a pound, comb and extracted.
>
> The American Bee Journal is a great help to me. I read it as it comes on Thursday morning. J. W. CULVEY.

* * *

Mr. W. H. Pain, for the Sandwich Islands Honey Co., wrote us as follows, on Feb 4:

> EDITOR AMERICAN BEE JOURNAL.—
>
> *Dear Sir:*—On page 35, you say there must be a cipher too many in the report of W. H. Pain, when referring to big crops of honey. Your doubt is quite reasonable, judging from the way they have put it. The mistake made when compiling the returns arises, I think, in the following way: First, the reported output is quite right, viz., 300,000 pounds, but the number of colonies should have been given as 2500, and that for the Sandwich Islands Honey Company. Personally, I had at the time of making the return some 200 colonies of bees, which I also reported. Now what I think has occurred is this: The Company's output of extracted honey has been given, while the number of colonies personally owned by me have been given as producing it, which is not a fact. By correcting this in your next issue you will oblige.
>
> This year we have 3500 colonies, and I have increased to 1000, so that if we have anything like seasonable rains the report of 300,000 pounds should be left far behind. Yours sincerely,
>
> W. H. PAIN.

We are glad to make this correction, and wish to thank Mr. Pain for writing about it. We took our data from the last Annual Report of the National Bee-Keepers' Association.

Contributed Articles

Queen-Pointers—Emenies of Bees.

BY PROF. A. J. COOK.

SUBSCRIBER asks what I think of the policy of clipping the queen's wings, and whether it is wise to remove the queen from the hive at the dawn of the honey harvest?

Of course, clipping does not prevent the bees from swarming, nor will they refuse to cluster if the queen is not along. Indeed, the bees often, I think, generally begin to cluster before the queen leaves the hive. But it is certain that the colony will not go off if the queen be not with them. Of course, if the queen's wing is properly clipped she can not fly, and cannot go with the bees, and so clipping will often, in the absence of the bee-keeper, save to him a colony of bees. The queen will, however, come forth as the swarm issues, even if she has her wings clipped, and will wander off, and may never get back to the hive. Indeed, it is common for the queen to be lost, in case there is no one by to see that she regains the hive. She is often more easily found, as a clump of bees usually find and form a ball around her.

In case no one is by, and the queen is lost, the bees will wait till a new queen is hatched, when they will swarm again, and in case there is no one by to hive the swarm, they will hie them to their new home and be lost.

Often, in large apiaries, several swarms may issue at once, and may all alight on the same twig or tree. In this case, it is much easier to hive them in one, two or three hives at will, in case the queen is not with the cluster; else it is no easy matter to hive them and save all of the queens.

I know a very thrifty farmer that has added substantially to his gains for many years by keeping a considerable apiary. More than once his honey-product has secured to him more than all else on the farm. He is not willing that his wife shall hive the bees, as he thinks that too much for her strength, but he and she are willing that she should go out and catch the queen as a swarm issues, and cage her and place the caged queen in the hive from which the swarm issues. This takes but a little time, and she often said in my presence that she rather enjoyed it. Of course the bees soon go back to the old hive, and all is serene for the present, and all is normal except that the queen is caged. As the wife places the queen in the hive she places a stone on the hive to mark it, and as soon as her husband comes to dinner, or to the five o'clock supper, he divides the colony, removes the queen-cells, or acts as his plan suggests. In this way he cares for his bees, with no interference with the general farm work.

In case of "out-apiaries," this plan works well. One in this case must hire a faithful boy to watch for the queens. One can care for far more bees by this plan. I cared for the bees for years at the Michigan Agricultural College, and did my regular college work, and I rarely lost a colony from swarming, and rarely lost a queen, and I could not have done it had I not practiced clipping of the queen's wings.

I know of but one valid objection to this practice, and that is, it mars the appearance of the queen a wee bit. I do not think that this objection will weigh much with many of our practical bee-keepers. The objection that is sometimes urged that it injures the queen, or makes her less pleasing to the bees, has, I am sure, no basis in fact. Indeed, as is well known, the ants really practice this same method. As soon as the queen has taken her wedding-flight, the worker-ants fall to and bite off her wings, so she must ever afterward remain dutifully at home whether she likes it or no. Some of our bee-keepers, it is true, do not clip their queens, but I think by far most of them do.

As to the removal of the queen from the colony at the dawn of, the harvest, I have practiced it but little—just enough to prove that it is practical, and in some cases will pay well. One of the most successful lady bee-keepers I ever knew practiced this for years, and her large yields of comb-honey was a guarantee that this was good policy in her case. We all know that the difficulty in securing a good yield of comb honey is in inducing the bees to enter the sections. It is the nature of bees to store close to the brood. When we place the sections above in a receptacle, they often refuse to be led to them. By removing the queen the egg-laying ceases, and they have energy to spare and so are more ready to go up to the sections and fill them. In this case they commence at once to rear queens, and if the bee-keeper is sure to remove all but one large, fine queen-cell, he will not only get ofttimes more honey, but will requeen his apiary with young queens. This last is often a very paying procedure. In cases of short honey seasons this has even more to recommend it, as the brood lost would mature after the season was over, when they were no longer useful.

I am aware that the best theory would seem to be that we can not have too many bees in the hive, yet the phenomenal success of the lady referred to above would seem to show that there may be exceptions to this, as to every good rule.

We readily see that the time lost is not very great anyway, as the bees will soon get a new queen, and her youth and youthful energy may more than make up for the time lost; this last, even in times of protracted honey harvests, such as the best seasons always give in Southern California.

VERY QUEER ACTION—MISTAKEN ALFALFA FARMERS.

Strange that in this day of better scientific knowledge, any one could be found that would believe that bees injure bloom of any kind. Yet such is the case. The alfalfa farmers of one of our States are threatening the bee-keepers with a suit in law because the bees are robbing the alfalfa of valuable material in gathering the nectar, and thus are injuring the farmer, who produces the hay. This is wholly an error, as every one should know. The nectar is so very small in quantity, that it would affect the hay none at all. The whole purpose of the bloom and nectar is only to attract the bees and other nectar-loving insects for the good of the plants. Pollination is absolutely necessary to seeding of the plants, and bees do this work. No bees, no pollination; no pollination, no seeds; no seeds, no planting, and soon there would be no alfalfa. Surely, these farmers need instruction in the very rudiments of botanical science.

ENEMIES OF BEES.

I am asked for a list of animals that capture and kill bees. I will say that these will be found, described and illustrated, in my "Bee-Keeper's Guide." This is the list:

Shrews, among mammals; kingbirds, among our feathered friends; toads and frogs among Amphibians; among insects, we have cow-killers and ants in the order Hymenoptera; robber-flies, among Diptera, or two-winged flies; the Phymata bug among Hemiptera, and others of the so-called-kissing bugs; Mantis among Orthroptera; and darning-needles among the lace-wings; among the spider-like animals we have some of the true spiders that are not adverse to a banquet of bees occasionally; some of the Datames in the Scorpion group, and some of the mites among the lowest of the order of spiders. These last, and also the bee-lice, are not usually fatal to the bees. Of course, in the list I have made no mention of bee-moths or the bacon beetles which do not destroy the bees but are equally mischievous with those insects which do actually destroy our pets of the hive. Indeed, the very worst insect of all is the old bee-moth, which however is not very disturbing to the provident bee-keeper.

CORRECT NAME OF THE HONEY-BEE.

I see a note in one of the recent bee-papers regarding the correct name of the bee. It is "Apis mellifera," although, as we know, almost all writers call it "Apis mellifica." In all such cases priority rules, and so the first name given to the insect holds. As I understand, Linnæus first gave the name, A. mellifera. He afterwards, in his rush of work, evidently forgot that he had already named it, and redescribed it as A. mellifica. We see, then, that the correct name is A. mellifera, as that has priority.

Los Angeles Co., Calif.

No. 2.—Comb or Extracted Honey—Which?

BY C. P. DADANT.

IN the previous article, I stated that in a large apiary swarms were not wanted. We had another reason for not wanting swarms. Every since 1872, or for over 30 years, we have had out-apiaries. It is not always possible to hire help to take care of out-apiaries, neither does it always pay to hire some one on purpose to catch swarms. On the other hand, the farmer on whose land the out-apiary is located often has no time to attend to the swarms, for they come at a season of the year when every able-bodied person has his or her hands full. There is the corn to plow, the wheat to harvest, and the hayfield to care for. So, many swarms are lost. It was thus a matter of great importance to us to have a method of management by which swarming could be, if not entirely avoided, at least decreased very materially. Thus we had strong leaning towards the method which would bring about the desired result. These conditions still remain.

Another reason with us for preferring extracted honey, is the great ease with which it may be handled. Thirty years ago our roads were much worse than they are at present, though we can not make a very great boast as yet of their condition. But apiaries along the Mississippi are often placed in locations that are difficult of access, among steep hillsides where roads are of the worst description that one can imagine. For years we had an apiary located at the top of a hill half way between Hamilton and Warsaw, and the road between the two cities was nothing but rocks or mire. Comb honey needs very careful handling, and the jostling over rough roads easily damages it, while extracted honey, in barrels or in cans, may be hauled up and down the roughest hills without danger of damage to anything but the vehicle, if the load be too heavy. Shipping of either kind also shows the same advantages for extracted honey. The apiarists who are on a main line of railroad, so that there are no changes of cars between the loading at the station and the unloading in the large city, take the minimun risk; but we had the bad luck of being on a way station, and could not reach the big city without at least one change of cars, unless the honey had been shipped in carlots. So we always had more or less breakage and leakage when shipping comb honey away. This gave chances for disagreements with consignees or commission men. The only way in which we had well succeeded in transporting our honey safely, was by Mississippi river boats to St. Louis. But the St. Louis market, I am sorry to say, has proven one of the cheapest markets in the world. I can hardly say why, unless it is because much inferior honey from the South has found its way there and spoiled the market.

With extracted honey, on the contrary, we have never had any loss, outside of the occasional stealing of a can full by some unscrupulous railroad hand. Well selected barrels, or well nailed tin-can cases, have proven safe packages for the transportation of our honey even from here to Paris, France. To ship small cans or pails with lid, we make boxes that cannot be turned over, with a handle across the top just as for a basket. Yet, comb honey is now packed so that it will stand a great deal of rough usage, and the objections which I indicate do not have as much weight today as they had years ago.

Keeping the honey over from one year to another is another point which argues strongly in favor of the honey without the comb. I have never seen honey in the comb a year old or more that could be sold at as good a price as new honey. The changes of temperature are not good for it, and I think there are very few bee-keepers who keep comb honey in any quantity from one year to another. If it is kept in a warm, dry place, it will do best, but, somehow, it will show its age and will be less salable.

Extracted honey may be kept for any length of time, if it is kept in the dark and in tight vessels, provided it was sufficiently ripe when put up. This is of great value. In good seasons we are not the only ones who have a large crop. The season is apt to have been successful for many others also, in our section. The price of honey is therefore likely to be less, and it has never been my policy to sell my crop at once at the best price I could get, unless that price was sufficient, in my estimation. I want for my honey as fair a price as it is possible to get, and it is often necessary to keep it, a part of the crop at least, for a year or more.

During the 80's, we had a number of good crops in succession, and our honey was of the very best quality. I remember that at that time it was about four years before we reached the bottom of our pile of barrels full of honey. We were thus able to get our price during a season of scarcity. I believe that all producers of comb-honey will agree with me that it would have been bad policy to keep comb honey so long. But the extracted honey, well ripened, and in a dry store-room, would keep as good as fresh. A gain of one-third in value between the price of the crop in a season of plenty, and the price of this same crop in a season of scarcity, is well worth considering, especially if we think of the fact that you keep your trade if you can supply the customers when no one else can.

Perhaps the readers will think that I am too partial to the production of extracted honey; that a number of my objections will not apply in their case. I am not trying to win them over to my side; I am just stating things as they have appeared to me, as they appear to me yet. I am not interested in the following of the production of extracted honey by any one but our own selves. I mean to show both sides of the question as I see them, and let the reader make his choice, if he has not already done so.

I have still more arguments and facts to present in a further article. Hancock Co., Ill.

Convention Proceedings

THE COLORADO CONVENTION.

Report of the Proceedings of the Colorado State Bee-Keepers' Convention, Held in Denver, Nov. 23, 24, and 25, 1903.

BY H. C. MOREHOUSE, SEC.

(Continued from page 136.)

The next on the program was the following paper by Mr. Frank H. Drexel, on

COMMERCIAL ORGANIZATION FOR THE WESTERN SLOPE.

Is it desirable? and if so, how can it best be effected?

I do not propose to inflict upon this convention a lengthy paper, for the very good reason that I am not well informed on the question under consideration. Your Secretary has made a mistake in asking me to speak out; but, then, I haven't much patience with those who refuse to contribute their mite if they are requested to do so.

Let me say right now that I haven't been all over the Western Slope; that I am not familiar with conditions in Mesa County, but haven't any reason to believe that they differ widely from those of our own, that is, Delta and Montrose counties.

Since the season of 1900 things have been going pretty well over here, and bee-men haven't felt disposed to go to any trouble or expense to protect themselves against what seemed to be some far-off contingency.

But 1903 has been an eye-opener to us all. With prices on supplies away up yonder, followed by a fair to medium honey-flow, and lastly, as a sort of settler, prices on No. 1 comb hovering around the $2.00 mark, f. o. b. cars, what wonder that we Western Slopers are anxiously inquiring of ourselves, "What next!"

It is needless to say that different men have different ideas as to the cause underlying the change of things. Supply manufacturers, honey-dealers, and local supply houses, all come in for their full share of blame, but I haven't heard a great deal said about the share of responsibility which bee-keepers have had in the matter.

Now we all know, of course, that bee-men can not easily fix the price of supplies, neither can they regulate the price of honey to a nicety even when well organized; but how much can they be expected to do for themselves when they are all acting independent of each other, as they seem to be doing over here!

Last year we received for our honey a better price than did the members of the Colorado Honey-Producers' Association. I am sure I don't why, but I do know that we all felt good over it. When I wrote to the manager of that Association regarding this in connection with taking stock in that Association, he said that he was glad to know that we had fared so well, but thought that it might be a good idea to get under cover just the same, as no one could tell when we would find the tables turned on us. Well, they are turned.

There isn't any use in abusing our local dealers because of their share of profits which we have to pay. We would all of us do just about the same thing if we were in their place. Besides, they are not in business to help along bee-keepers, but, on the contrary, to help along themselves. I think that even the densest intellect can grasp that thoroughly. Let's be reasonable and ask each other why it is that we do not go into the business of supplying ourselves with bee-keepers' supplies, and sell honey for bee-keepers, and do the business on business principles, for bee-keepers who would like to share in the profits, just as the dealers are doing for themselves. If they are not making any money at it then we will know it pretty soon, and we can turn the whole thing over to them again. Then, on the other hand, we would very likely not get all the business anyway, for I notice that on the Eastern Slope there are other supply houses besides the Colorado Honey-Producers' Association, and all doing good business, perhaps.

There are those who look upon organizations, which seek to better their conditions, with distrust. They seem to fear that the manager, or the officials, may prove themselves to be dishonest or unqualified to do their work properly; and yet they must admit that there are cases where such organizations have weathered the storms; that the officials have been honest, and are as apt to remain so as the heads of any other business houses. If there are any other bee-men on this side of the Rockies who would hesitate to join an organization on these grounds, I wish to say this: Confidence is the basis of all commercial enterprises these days. If you were treated in like manner by every one you could not do business, unless it would be on a very small scale indeed. You may misplace confidence, and you may lose thereby, but in the long run you will find that confidence wisely bestowed is a good investment. Now, don't you know, that these men who have hobbies for paying "cash at the producers' depot," and who are so very busy "helping producers find a market for their crop," because they have "an unlimited demand at the right prices," are not moved by philanthropic motives, or because they think it's the right thing to carry this cash system clear through to the end? No, indeed, these men know our weak points, and wish us to hold such views, because a little bit of *cash* looks so large to most of us.

Let me tell you what happened to me a few years ago. My crop of honey had been produced, but I was taken sick. The consequence was that I did not get it off when the bulk of the honey was moved. It was late in the winter when I finally did get my honey ready. Of course, I needed cash, and I tried to sell my crop. Our local house couldn't use it at all. Had no market for honey then, and especially none for the 35 cases of extracted honey in the lot. It was then that I received an offer from the firm just spoken of. They said that prices had been pretty good earlier in the season, but that at such a late date they did not see anything better than 9 and 10 cents for No. 1 and No. 2 comb, and couldn't use the extracted at any price. Wasn't that a pretty how-de-do? And an unlimited demand, too, at right prices? Well, I had written to Mr. Rauchfuss, of the Colorado Honey Producers' Association, and notwithstanding the fact that I did not know him from Adam, I did, on the strength of what I could learn, ship that car of honey to him. Now, mark you, my returns didn't come post-haste. It wasn't *cash* at the depot, but it was about $2.40 per case *net*, after taking out 10 percent commission and freight. The extracted honey netted me about 5¼ cents.

In speaking of $2.40, I mean that much for both No. 1 and No. 2. The offer of 9 cents and 10 cents would have made it about $1.80 for No. 2, and $2.10 for No. 1. Don't you think that the confidence in the Association paid me? I think it paid me about $135 worth on the comb honey alone. I certainly admire Mr. Rauchfuss, from what I know of him, and I believe he understands his business, but I don't feel like paying him quite such a compliment as to believe that he was so much better informed on the condition of the market that he could place my honey at an average of $2.40 per case net to me, when the other gentleman could see but about $1.95 in it.

When I remember my experience, and then turn to that page in the last number of the American Bee Journal for 1903, where this same firm goes for Mr. York about talking so much of 14½-cent honey when he should be getting after bee-keepers' associations on the free advertising subject, it is then that I can see the strong point of the *cash* at producer's depot at right prices.

Don't you think it's time bee-men of this side get together and cut out these profits which might as well belong to us? Don't you think it desirable to get what we can of the margin which supply men and honey men work on? The work before us is not new. We have the Colorado Honey-Producers' Association as a model, or as a strong arm to lean upon.

And I want to say that it is not merely a question of saving in commissions which would grow out of an association of bee-men, but what is even more important, the reputation which our goods would secure for themselves if the business be rightly managed. There lies the secret of the whole thing—the one thing above all others worth working for; the thing most desirable, because it is lasting. It is also the most difficult part of the business, but we can do it, and when once the machinery is in full operation, you and I will wonder how we got along without it.

There are some who believe that the Colorado Honey-Producers' Association should reach out and handle the product of the Western Slope direct. But they forget to take into account the difficulty of such a course. In the first place, they must of necessity have a car of honey as the smallest amount which they can handle at any one time. To make up this quantity it becomes necessary for several producers to go in together unless conditions are such that they feel almost compelled to do so. If they were associated together they would be more inclined to look to this part of the business.

In the second place, the Colorado Honey-Producers' Association must be quite certain that the honey in the car is graded alike, and up to their standard. Under the present system they can not practically supervise this part of the work, and right here the local organization will perform its most important work; that is, attend to the proper grading of the honey, so that the loaded car will come up to the full standard.

When it comes to how best to effect an organization of bee-men over here, and what the nature of such an organization had best be, I must confess that I have little to suggest.

It has occurred to me, however, that each county might have its local organization, each having the same object in view, and working under the same rules; each have a local manager to look after the grading.

But I want to say that I am not clear about how those feel who have given this subject much thought regarding an organization over here; whether they have contemplated a sort of branch business for the Western Slope, or whether an entirely independent organization was contemplated.

Personally, I would prefer to see each county organization over here a branch of the Colorado Honey-Producers' Association, although Montrose and Delta might work well together. Mesa County is large, and Grand Junction is some 80 miles from here. I fear it would be too costly to get together.

However, the main thing is to make a start. If a number of bee-men of each county, who feel deeply interested, would meet at their respective county seats, or any other central point, and go prepared not merely to talk but to act, something might be done this winter.

I do not know of anything better than to have some one man get himself thoroughly informed as to how the Eastern Slope organizations are formed, or have been formed, how they work, and what the attitude of the Colorado Honey-Producers' Association is in the matter. We could then act intelligently, and do it quickly. In this we have a great advantage over our Eastern Slope friends.

It is my hope that there will be a great many representatives from over here at the convention, who will interest themselves personally in this matter. But if there should not be, and it would be necessary to send some one to Denver to post up, I really think we could well afford to chip in and help defray the expenses.

It will cost money to get the business going. We must put up cash. Everybody knows that money is what counts after all the rest has been done. And now I shall ask this convention to ventilate this matter thoroughly, as time will permit, for it certainly concerns the Eastern Slope bee-man as much as any other one thing, to see the whole State fully organized and working along the same lines.

FRANK H. DREXEL.

Pres. Harris—Several years ago some of us at Grand Junction formed the Mesa County Bee-Keepers' Association, and brought down the prices of hives to $1.00, and 85 cents, for four or five years. Then we got into a mix-up as to who should be inspector, and ran into politics. Two years ago some wanted to combine with the Fruit Association. It turned out just as I predicted. We paid a higher price, a bigger commission, for handling by the Fruit Association than if we had done it ourselves. Now, we can not get together down there. The buyers are slick, and the bee-keepers have confidence in no one for a leader. They have not been willing to dig down into their pockets, and it has cost them hundreds of dollars. But I feel proud of our State Association. I believe that with true men and women, and the proper organization, we can sell and buy for ourselves, and the trust won't throttle us.

F. Rauchfuss—The Committee on a Year Book reports that they favor the publication of a year book, and recommend that it be issued. [Adopted.]

A motion was carried that a delegation of bee-keepers represent the State Association at the January convention of the Colorado State Horticultural Society. F. Rauchfuss, J. B. Adams, M. A. Gill, Mrs. Mellette, and J. U. Harris were appointed as the committee.

The Committee on Resolutions recommended the adoption of the following resolutions:

Resolved, That we, the members of the Colorado State Bee-Keepers' Association, appreciate the value of Mr. Benton to apiculture, in the investigation of bee-diseases and in other lines, by reason of his official position in the Bureau of Entomology, and recognize the fact that he could and would do much more if adequately provided with working funds for research; and that we do hereby extend to the National Bee-Keepers' Association the assurance of our cooperation in bringing the matter to the attention of our legislators.

Resolved, That we, the members of the Colorado State Bee-Keepers' Association here assembled, do desire to tender our thanks to the press of Denver for courteous treatment in sending their representatives to our meetings and making reports of the same.

Resolved, That we, the members of the Colorado State Bee-Keepers' Association, deeply deplore the loss we have sustained, as a body and individually, in the death of F. H. C. Krueger during the past year, and declare him to have been an inspiration to us by his enthusiasm, and an efficient help in times of deliberation, in spite of the comparatively short time that he was connected with us; and that a copy of this resolution be transmitted to his family.

Resolved, That we, the members of the Colorado State Bee-Keepers' Association, having heard with heartfelt regret of the death of Mrs. A. J. Barber, hereby declare our grateful recognition of her instant response to the support of every progressive move of our Association, so that in spite of the fact that circumstances prevented her from meeting with us, she was one of our most valued members; and our admiration for her perseverance in building up a model system of apiaries under adverse circumstances; and that we recognize that the deceased, by sheer force of merit, attained a place both in the history of apiculture in Colorado and in the United States, by reason of her original ideas imparted to the bee-papers.

J. B. ADAMS,
F. L. THOMPSON, } *Com.*
J. CORNEILIUS,

The resolutions were adopted.

Mr. Morehouse—I move the whole matter of the aid of the National Association, and the negotiations with Mr. France in relation thereto, be left with the committee having that matter in charge, with power to act in the name of the Association. [Carried.]

(Concluded next week.)

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Selling Bulk Honey and Beeswax.

Seeing that I am the only lady member representing Kansas in the National Bee-Keepers' Association, I will tell how we sell our honey and beeswax. There are 4 of us in our family. My husband is a railroad engineer, my eldest son a blacksmith, and my youngest son is a clerk in a department store, so you see our bees only get our spare time. We quit producing comb honey a long time ago. It is now produced in half-depth frames, and extracted in the usual way. The comb honey is cut out of the frames and nicely fitted in tin pails, all we can get in a pail, then filled up with extracted honey. Our crop is usually about 1500 or 1800 pounds, and is sold in about 6 or 8 days to our regular customers. The pails hold from 1 quart to 2 gallons. We get from 18 to 20 cents per pound for it.

Now for beeswax: All waste is put into wax and weighed; then we take equal parts of good paraffin, melt all together and mould in 1-ounce cakes and sell to druggists at 40 to 50 cents per pound for laundry purposes. We sometimes sell the wax direct to laundries. Some will say that this is adulteration. It is not; it is a mixture of beeswax and paraffin for laundry purposes, and sold as such.

Crawford Co., Kans., Jan. 28. MRS. S. M. ROBY.

Your crop of 1600 to 1800 pounds of bulk honey is sold to regular customers, the whole being sold in 6 or 8 days. That looks as if most of your customers bought it once a year as a treat—certainly those who only get a quart will hardly make it last through the year. Possibly your customers buy of you once a year, getting their supply elsewhere during the remainder of the year. Possibly they use up in a few days or weeks the supply got of you, and then go without the rest of the year simply because it is not convenient to get more. The question is, whether you might not increase the good work you are already doing either by keeping more bees and producing more honey, or by buying honey so that you could furnish your customers all they would use thoroughout the year. Very likely you know your own market best, but it is no harm to throw out a suggestion.

Foul Brood—Poor Season in 1903.

I have kept bees for 13 years, and found, last season, that for the first time my bees had foul brood. One colony was in very bad condition, and several others slightly affected. All seemed right when divided at swarming time. I have been told that the disease has never been in this locality, and I can not account for its appearance.

Notwithstanding the early spring and good condition of bees in April, the season of 1903 was very poor. With fields white with clover very little nectar was gathered except for a few weeks in July. In August there was constant rain, and so much cool weather that we had no fall flowers, and hives that were so full in summer were soon depleted of stores, and heavy feeding for winter was necessary. The cold and snow came early, and the bees had no chance for flight since the feeding was stopped, and I fear there will be some heavy losses. MRS. WM. MIDDLECAMP.

Winnebago Co., Wis., Jan. 18.

How to Make Nougat Candy.

DEAR MISS WILSON:—Have you among the "secret archives" of the "Sister's Department" a recipe for the celebrated nougat candy made of honey, almonds, etc., in the province of Southern France for the feasts of the Christmas Kalends? If so, will you kindly publish it? or, if not, perhaps some one else can give it.

As the confectioners make it, it tastes very nice, but I can't bring my conscience to use their recipe, which calls for 15 pounds of glucose to 12 of honey. This shows what pure (?) candy is made of. RALPH D. CLEVELAND.

Dupage Co., Ill.

Nougat candy is made with almonds or other nuts, a very toothsome article that I am told was rather common in this country half a century ago, but I don't know how it was made. Can any one of the constituency help us out?

Possibly some one of the sisters experimentally inclined may be able to evolve some combination of nuts and honey even better. Certainly one of the brethren should not appeal to the sisterhood in vain.

Bees Wintered Outdoors.

I packed my bees away for the winter out-of-doors, but each year when they first start to fly out I lose quite a few.

1. Would it be a good plan, when the bees have started to fly, and have cleaned themselves, to place them in a dark cellar until spring?

2. Would it be better to leave them outdoors and put screen-wire over the entrance to keep them from getting out and becoming chilled?

3. Would it be better to leave just room enough for one bee to get out at a time? MRS. ANNA WECKERLE.

Cook Co., Ill., Feb. 2.

1. If you put them into the cellar at all put them in in the fall. Instead of putting them into the cellar to prevent their flying out, put a board up in front of the hive so the sun can not shine directly into the entrance, for the bright sun shining in entices them out when it is too cool for them

to fly. It will be worth while, however, to take away the board whenever there comes a good day for them to fly, say a day when the sun shines brightly with no wind, and the thermometer above 45 degrees.

2. Do not fasten them in; they would fuss to get out, and you would lose many bees by it. Better let them alone; no doubt many of the bees that fly out and die are old or diseased bees that would not live longer any way.

3. It might be a good thing to contract the entrance somewhat. An entrance amounting to about an inch square would do very well for early spring until it comes settled warm weather; but don't think of making the entrance so small as to allow passage for only one bee at a time. It might be well to look occasionally and see that the entrance does not get clogged.

One of the Younger Sisters.

Dear Miss Wilson:—I have been reading the American Bee Journal for some months. I take delight in the women's page; I think it is a sign of progress for the women bee-keepers of our land to write for and help along a bee-paper.

I am not a lady bee-keeper exactly, but I am a girl who likes to help her father take care of bees and honey. We bought 3 or 4 colonies of bees 2 or 3 years ago, and came out with 6 colonies last spring; in the summer we increased to 14, and sold over 200 pounds of comb honey. In this section white clover honey is about all we have that is not yellow. We get 12½ cents per pound for chunk honey out of the frames, but we get 15 cents for nice, full sections. We use shallow frames a good deal in the supers, as the bees fill them better for us.

I do not wear a veil, but if I think we are going to have a hard day I bring a large square of mosquito-bar into the apiary, and if the bees get angry I throw it over my bonnet, and pin it to my dress in front. I never think of gloves, as I remember getting but one sting on my hand, and it was not bad. I am the only one of the children that can work with bees with any safety. Pa gave me a book, "Langstroth on the Honey-Bee," some time ago. I am proud of it as I like to read about bees.

I hope you and the American Bee Journal may have much success, **Ann F. Kelly.**

Hickory Co., Mo., Feb. 1.

A girl who likes to help her father is usually *pretty good help*, and I have no doubt your father finds it so.

Next time tell us how old you are, and remember we like to hear from the girls.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

FOUL BROOD AND THE COLORADOS.

Foul brood is hardly a nice topic, and most discussions of it simply thresh old straw without getting anything new; but the Colorados, on pages 23-25, say some things not altogether old. Those of us so happy as to have little or no experience need to keep posted all the same—never know what a season will bring forth. Mr. Lindza's experience should not be overlooked. His bees, on a prairie six miles from other bees, took foul brood from an empty hive gotten elsewhere. That the disease spreads worse where one runs for extracted honey than where section honey is the object, is a matter not often mentioned in print. One degree of virulence, it seems, is that there will be one colony in the yard lightly affected. Next season that one will be badly affected, and four or five more will begin lightly—and so on. And a weak colony with lots of comb-room will have their brood-nest on one side of the hive till those combs get very corrupt; then they will shift to the other side of the hive and rear brood there for a spell, which will be nearly clean. Mr. Aikin finds it worth while to move a diseased colony to a number of different locations inside the yard till there's not much left of it but the combs, and then close it out. I fear this would not *always* be a safe way of operating. A quite general view is that it's best to localize all the infected colonies a good many rods away from the sound ones before manipulating the disease much. Very desirable that sound colonies should be where they will not receive even one bee that carries diseased honey.

DISPOSING OF A SUPERSEDED QUEEN.

The question of what becomes of a queen when she is superseded is more or less in a fog—and here's a beginner who has an observation that seems to be relevant. About a hundred bees appeared that were apparently pushing the queen in front of them. At the edge of the alighting-board a few took her, and the group flew away and disappeared. Could human beings manage a disagreeable job more politely? D. B. Boynton, page 29.

POLLEN AND FOUL BROOD.

Does that 'are "County" always get things straight, I wonder? The assertion that one particular kind of pollen is always found when foul brood develops is important—and also makes large demands on our credulity. We want to know who says it—and, lo, it's "Kane County" that says it. Page 29.

POETRY AND APICULTURE.

This time Mr. Secor gives us a very beautiful and well-finished poem. If a critic was ugly, and desperately wanted to throw a stone, he would find the tenderest pane of glass an apicultural one. When bees fly late, and do not come home till eventide, it's not "small gain," but big gain, they are up to. But in pointing the moral, of course, we are asked to consider that *any* amount of honey a colony of bees can bring in one day is small. Page 36.

EXTRACTING HONEY—GRANULATION.

Yes, Mr. Davenport, the excellent plan of extracting honey only at the close of the season is knocked out in localities where the early honey gets so thick you can't throw it out.

Not remarkable that extra-thick honey granulates slowly. Granulation requires motion. It might be foreseen that honey so thick as not to run out of a saucer when it is turned over would be hindered about making the necessary interstitial motions.

That rather thin, ordinary honey is improved by being heated up is orthodox—and I incline to be more than orthodox, and wonder if the loss that the best honey is said to suffer from careful heating up isn't mainly imaginary. Page 38.

THAT MUCH-SWARMING EXPERIENCE.

With swarms up far beyond the tally of 200, and scarcely anywhere to put them—a special plan imperative for each case—I can just put a brotherly arm around Edwin Bevins in that situation. No one who has not been through that mill himself is likely to be entirely appreciative. More can be done in the line mentioned than would be thought possible in advance. And the feeling of triumph at getting through each day somehow—and the bees all put some place—partly pays expenses. Page 39.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

What Caused the Loss of the Bees?

I have 10 colonies and 20 new hives ready for spring, but it is so nice to-day I took a look at my bees. I found 3 colonies dead, 2 of the best I had. Last winter I did not pack my bees, and they came out all right in the spring.

In the fall I fed the bees well for winter, and in November I packed them with chaff on the sides and top. The top is made of a frame of wire-netting. Where I use chaff I put about 3 inches of it on the wire frame. I left a space for 2 bees, going in and out at one time; that hole was shut up with dead bees and ice. The comb looks moldy and damp, and frosty-like. The bees are all in a heap in the frames, dead, and there is plenty of honey with them. One week ago my bees were all living yet. We had 2 warm days, and rain and flood, then it was very cold. I think the wind is very hard on bees, but I do not think it would kill them if they were cared for in the right way. Now, I went to work and opened the entrance about 2 inches in the front of the hives and took the chaff all off but about 3/4 of an inch of the top frame, so the dampness and dead air can come out more, until I hear from you.

I am going into the bee-business, and I find I will have trouble with them, so that is the reason why I ask you for advice.

I have looked over my books and few journals that I have, and I could not find anything to fit my case. I have looked over my bees and I think I have found what is wrong, but I may be wrong, as I was before. PENNSYLVANIA.

ANSWER.—The present winter is a very different thing from the winter before, and you will have plenty of company in losing bees. It is not so much the severe cold as its long continuance. You should have left a larger entrance than just enough for two bees to pass at a time. That doesn't give air enough, and then the dead bees and ice closed the entrance so the bees smothered. Keep watch that the entrance does not become closed again. Instead of taking off part of the chaff you should have raised the cover just the least bit, perhaps an eighth of an inch, laying a nail under it.

A Beginner's Questions.

1. I read in the American Bee Journal and in Dr. Miller's "Forty Years Among the Bees," that queen-excluders and queen-guards are good things. Kindly inform me where I can buy them, and at what price.

2. How can I recognize the queen?

3. How can I distinguish queen-cells, worker-cells, and drone-cells? COLORADO.

ANSWERS.—1. Any dealer in bee-supplies—a number advertise in this journal—can furnish them at a cost of 15 to 25 cents each for queen-excluders or honey-boards, according to the kind, and 13 cents each for entrance-guards.

2. Look for a bee longer and larger than the worker-bees, with abdomen longer than its wings.

3. Take a piece of comb and lay a rule on it. If the cells are 5 to the inch, and most of them are, they are worker-cells. Drone-cells measure 4 to an inch, and queen-cells 3. Queen-cells point downward, and not sidewise like worker and drone-cells. A queen-cell not far advanced looks like an acorn-cup; when sealed it looks like a peanut.

Making Hives—Spacing Frames.

I am a beginner, starting last spring with 7 colonies, all second swarms; they were the best I could get. I expect to increase to 30 or more colonies the coming season, as I believe the field here will stand that many, and pay.

1. I can make my hives cheaper than I can buy them. I like the plan used for hanging the frames in a patented hive that I have. Can I make those hives for my own use and not lay myself liable for arrest and fine? I don't want to sell them.

2. Where can I get a book that will give me directions for making hives?

3. Is there a reward of $1,000 for the man that can make a frame of comb honey, fill and cap it? If so, where?

4. How far apart should frames be that are 7/8 inches wide?

The hives I have reference to in question 1, are the Heddon and Danzenbaker. INDIANA.

ANSWERS.—1. The law does not permit you to use any patented feature of a hive, even for your own use. The patent on the Heddon hive has expired, so you are free to use that. The patent on the Danzenbaker has not expired.

2. I don't know of any except the bee-books which give general instructions on bee-keeping.

3. Yes, A. I. Root has kept a standing offer for years of $1,000 for a pound of comb honey made without the help of the bees.

4. No matter how wide, the usual distance from center to center is 1 3/8 inches. Some make it 1 1/2.

Queen-Rearing—Nucleus Method of Increase.

On page 314 (1903), in answer to "Kentucky's" third question, you say: "The side shaved down is the one on which the cells are started, the other side, not cut, is dipped into melted wax and then glued on the bar." In Mr. Alley's book on queen-rearing, published in the spring of 1903, he gives directions for cutting the comb into strips, destroying the egg in each alternate cell, and then glue the strips on bars, but says nothing about shaving down the cells on one side of the comb. *a.* Is it part of the Alley method? *b.* Is it necessary? *c.* How much are the cells shaved down?

2. Suppose one had 5 good, strong colonies in the spring and wished to increase them to the largest possible number by fall, without caring for surplus honey, would it be better to divide each into 4 or 5 nuclei at one operation, thus making 20 or 30 nuclei to be built up during the summer into full colonies? Or, would leaving the original 5 as full colonies and drawing brood from them from time to time, to form the nuclei, give a large number of colonies in the end?

3. Would you kindly tell how you increased your 24 colonies, last year, to 184. ILLINOIS.

ANSWERS.—1. *a.* I *think* that Mr. Alley formerly gave instruction to cut down the cells, and I always supposed I was following his instruction in so doing. I had not before noticed that no mention of it is made in his 1903 edition, and it is just possible that he does not now consider it advisable. *b.* Not necessary; although I have always supposed it better. *c.* After the comb is cut up into slices, lay each slice on its side, and with a hot knife cut away half or more of the depth of the cells on the side to be used.

2. It is certainly a safer plan to keep the original colonies fairly strong, and would probably give the larger increase.

3. Mainly by the nucleus plan. The first thing was to get the original number strong, and it would not be far out of the way to say that the next thing was to keep them strong, for generally when brood with adhering bees was drawn from a colony four frames of brood were left. The increase was made chiefly at the Hastings apiary, which was visited every nine or ten days. When the colonies became strong enough, brood was drawn from them and put in a pile, sometimes 32 combs of brood being in a pile. Adhering bees were taken with the brood. On the next visit nuclei were formed by taking for each nucleus two frames of brood and bees from the queenless pile, giving each nucleus a mature cell or a queen. No draft was made upon any of these nuclei until they were strong colonies, indeed, sometimes brood was given to them to strengthen them. After the queenless pile was used up, upon any visit, by drawing from it to make nuclei, it was again built up by fresh brood and bees drawn from colonies that were strong enough to spare. You see, it's nothing but the nucleus plan, along with the idea of keeping all fairly strong. That avoided the danger of being suddenly left at any time with a large number of weaklings and the flow brought to a sharp close.

Moving Bees a Short Distance.

1. My bees are not on the summer stands, but I have a place built on the south side of another building where they get the benefit of the sun from the time it rises until about 4 o'clock p. m. Often when it is warm the bees fly out, and lots of them fall or alight on the snow and perish. Is it well to have them do so, or would it be better to stop them on such days?

2. Some tell me it is the old bees, and they would die anyway. Is that right?

3. In the spring, the last of March or the first of April, they commence to fly and gather pollen from the willows, before it is warm enough to place them on the summer stands, and last spring, after I moved them, there were lots of them that went back to the place where they were wintered. Do you think those bees were lost, or did they go back to the hive? If you think they were lost, what can I do to prevent it this spring? The stands are 15 or 20 rods from where they are wintered. MAINE.

ANSWERS.—1. No, it is not well, and it would be still worse to shut them in. Put some kind of a blind—boards, or something of the kind—in front of the hive, so that the sun can not shine into the entrance. The trouble is that when the sun is allowed to shine directly into the entrance it will entice the bees out when too cold for them to fly. But when a day comes warm enough for a flight, say 45 or 50 degrees, with bright sun and no wind, then take away the blind and let them have a jolly time.

2. Partly right; but young bees will be enticed out, too.

3. The probability is that they went back to the hive when they found no hive in the old place. Look and see whether bunches of bees settled near the old place, and you can tell for sure.

10-Frame and 8-Frame Hives.

In your answer to the "poser" given you by "Illinois," on page 91, you say; "If you say the eight 10's are to have in all just as many bees as the ten 8's, I think I'll take the eight 10's."

In any event, the average number of bees to each frame would be the same in both cases. Now, supposing the total number of bees in each case were 400,000, giving 50,000 each to the eight 10's, and 40,000 each to the ten 8's, making an average in each hive of 5,000 to a frame, in running for comb honey, which hive would you prefer? WISCONSIN.

ANSWER.—Now look here, those Chicago chaps are hard enough on me without your coming down from Wisconsin to make the puzzle any harder. As the question was put before, the matter of strength on the part of the operator was hardly to be considered, but you make no restriction, so that other things being equal the smaller hives would have the preference. Leaving out that element, I think I could give you a good argument why the larger hives should yield more honey. The number of bees that can go afield is larger in the larger hives, because a less *proportion* of bees must stay at home to keep things warm mornings, evenings, and cool days. While the large hives take more strength to lift, there are not so many of them, and it will take less time to take care of eight 10-framers than to take care of ten 8-framers. Now, if you would let it go at that, I could stop right there till one of those Chicago chaps studies up some new mischief. But I know you well enough to know that you will be saying, "But we don't care so much for theory as for practice. It is not what bees 'should' do that is wanted, the question is, 'What *do* they do?'" Well, since you insist upon it, I am obliged to confess that so far as I can judge from observation and experience, I think I get more comb honey from ten 8-frame hives than from eight 10-frame hives. Now, don't ask me why. I don't know.

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Bees in Good Condition.

I am wintering 56 colonies of bees on the summer stands. They had a fine flight to-day, and are all in good condition.

I use the 8-frame Quinby hive. I made kindling of my Langstroth hives 20 years ago; they are too shallow for outdoor wintering.

Henry Co., Iowa, Feb. 6. J. A. Thomas.

Oyster Packages for Holding Honey

Having read a number of articles about packages for extracted and bulk comb honey, I wish to make a suggestion in this line, to those who sell this grade to home trade, about a package that I think would do nicely for the delivery of bulk comb and extracted to the producer's home market. My idea is to use the paper packages that dealers in oysters give to customers to carry home their oysters in. They are made of heavy stiff paper that seems to have sizing in its composition. At any rate, the oysters, which have a fair percentage of juice not so thick as honey, certainly do not leak out of the packages.

They can be bought cheap, and of suitable size for small sales in the home market. They also may be carried a little farther, by the supply dealer having them made of waxed paper; but I consider they would stand quite a while before they would absorb enough honey so as to leak at all, even to be placed, perhaps, on sale in a grocery store for a short time. At any rate, they would serve to deliver the honey in, as the oysters are delivered to the purchaser. I have never known this oyster package to leak in taking oysters home from the dealer.

There was no honey to speak of stored in this locality the past season, but the bees had plenty of stores to winter on.

Chas. E. Clapp.
Cumberland Co., Maine, Jan. 22.

Four-Corner Water-Tanks for Bee-House.

I want to ask how Geo. Honess makes the four-corner water-tanks he speaks of in his letter on page 100. W. D. Hurt.
Cass Co., Mo.

Some Bee-Keeping Experience.

Replying to inquiries on page 70, I will say that I did not intend to run my 220 colonies of bees in one yard, but would put out 100 or more 4 or 5 miles from the home-yard, and run for extracted honey. I would use the home yard for comb honey.

My bees are in Wood Co., near the center of the State. Four years ago I moved 100 colonies from my home here to Wood Co. on account of there being nothing here to gather honey from, clover of all kinds having been killed by the previous hard winter. I arrived at the above-named place with my car-load of bees on June 17, after being three days on the road. The bees were much reduced in numbers on account of the starving condition before leaving home and the journey of 225 miles.

I located with a farmer who kept a few colonies of bees in box-hives. There is a good cellar under his large farm-house, which I secured the use of as a repository for my bees.

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As to the results from my bees, I took 4600 pounds of honey, and increased to 184 colonies by natural increase, and sold 18 colonies to neighbors (they furnishing the hives) for $2.50 each. The next year (1900) honey received was 8000 pounds, and increased to 290 colonies. The following spring I let out 115 colonies to an old bee-keeper, I receiving one-half of the crop. I lost quite heavily wintering, or rather springing. The first of June found me with 115 colonies, and my crop was 5500 pounds of comb honey, and I increased to 174 colonies.

In 1902 I lost quite heavily in wintering and springing, down to 108 colonies after selling 50 colonies at $4.00 per colony. The honey crop was 4500 pounds of comb, and increased to 180 colonies.

The spring of 1903 was a very hard one in Wood County, being very cold and wet, so the first of June found me with 112 colonies, and my crop was 3000 pounds of honey and increased to 220 colonies. I have them all in the cellar now.

About the first of April I go up and take the bees out of the cellar. My wife and two sons will come up in June and give valuable aid in caring for the bees. I. A. TRAVIS.
Walworth Co., Wis., Jan. 30.

Grading Comb Honey—Sweet Clover

Mr. Taylor, on page 835 (1903), says some things I have been thinking of saying some time.

In "fancy" honey it is required that both comb and wood be free from stain. Now, I can scrape the propolis from the wood, but the *stain* I cannot remove, because it penetrates the wood. What harm can it do the honey? Before using it is cut out and the section likely goes into the stove. There seems to be a craze for getting combs white. Now, the bees sometimes fill the cells so full that the capping comes in contract with the

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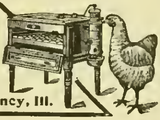
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honey, giving it a watery appearance, or they incorporate some yellow-colored matter into the capping, especially toward the close of the season. I believe these things cannot be prevented. As they do not affect the *quality* of honey, why should we sell it at a lower price than the "snow white?" Appearances count for something, but if the *quality* is there, people are not likely to quibble about a slight stain on comb or wood, especially if we sell direct to customers and are working up a trade.

Quite frequently we are told to remove the sections as soon as capped. This may be all right when the honey is not coming in very fast; but during a rapid flow is the honey sufficiently ripened? I doubt it.

Further, it is advised to remove supers *before* the sections are all capped, and then fill a super with unfinished sections and return to a strong colony to be finished. But when I do this I seldom can get a good job done, though some colonies do somewhat better than others. I usually contract the super, putting in only one or two rows of sections, putting strips of board in the vacant spaces; but even then the combs are not finished so nicely as if left undisturbed on their own hive. Who has had a similar experience?

I would suggest to those who contemplate sowing sweet clover in vacant and waste places that they try alsike instead. It yields a better honey and is not likely to be regarded as a weed and be cut down before it blossoms, as sweet clover often is. The roadsides here, in many places, were one mass of alsike last summer. It came from loads of hay on the way to market. Wherever the soil is suited sow alsike. D. McCarthy.

Allen Co., Ind., Jan. 16.

A Correction—Cold Winter.

Toward the close of the article on observatory hives, on page 53, I made a peculiar error. I said 20 degrees above freezing instead of above *zero*. We have not seen it 20 above freezing since early in November. In fact, the bees have had no general flight for about 12 weeks, and they are beginning to suffer. This winter is of unusual severity. I observed 26 and 24 degrees below zero early in this month. Still, the bees are wintering splendidly, and if we have a warm day soon, all will be well. Yesterday was still and warm in the sunshine, 42 degrees in the shade. I spread pieces of carpet and sacks in front of the hives, and scattered straw and leaves on the snow, and so succeeded in getting a partial flight from a few of the colonies.

Allen Latham.

New London Co., Conn., Jan. 31.

Miller Frames—Basswoods.

On page 42, "Illinois" asks Dr. Miller where he can get the Miller brood-frames. Don't all supply dealers advertise thick-top-bar staple-spaced brood-frames? Are they not practically Miller frames? The only difference is that Miller uses a nail instead of a staple. It is the kind I use, and I should advise everybody to use in New England, or where there is as much pine growth as there is here. Two years ago I advised a young man in Lowell to get the staple-spaced frame. When I went to see him the next summer, in July, I found he had Hoffman frames. I asked him why he got them. He said he asked for the staple but they sent the Hoffman. Well, when he tried to get them out he had a job, and the bees had been in the hives probably not over two months.

Again, on page 42, under the heading, "Basswood Lumber for Hives," are there not two species of basswood in the western forests —the American and the European? At my old homestead, on the banks of the Merrimac, there was basswood (or sometimes called linden), and until 4 years ago I had never seen any basswood anywhere else, but when I moved to Woburn, early in the spring of 1900, they told me there were linden or basswood trees at the Baldwin place. Well, in a few days, as I was passing that place, I was on the lookout for the basswood trees; nearly opposite the house there were 6 trees looking very much like pasture hickory. This was before the leaves had started. When they

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leaved out they had basswood leaves, but in no other way did they much resemble the basswood I had previously seen on the banks of the Merrimac. Later on I found 2 basswood trees nearer my place, one on each side of the street, not over 7 rods apart—one of them American and the other European. I am not a botanist to distinguish by their blossom the difference in the two species, but I can distinguish them by their other peculiarities. The American has leaves from 2 to 3 times larger than the European. The branches of the European are finer, and thicker together. From the external appearances of the two varieties, and from the experiences which I have had for a good many years in working with timber and boards, I feel sure that boards of the two varieties must differ widely. Is there not some woodman bee-keeper who has observed the difference, and can give us some more information?

JOHN P. COBURN.

Hillsboro Co., N. H., Jan. 27.

Distance Bees Work Profitably.

In Mr. G. M. Doolittle's article on "Locating Bees Among the Flowers," he doesn't say, but I think it makes quite a difference, the distance bees will fly. If located in a valley where the bloom appears first they would naturally follow it farther up the mountains than if they were located at the mountain and had to go to the valley first, over where there were no flowers yet in bloom. Another

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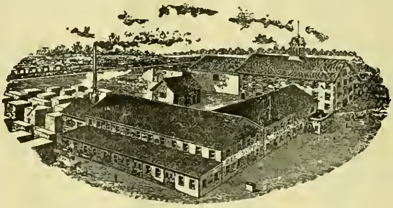

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thing, I think where there are 50 colonies of bees they go further for honey than 2 or 3 colonies would. When I had a few colonies of bees I did not notice them working on basswood 2 miles distant, but when the number was from 40 to 60 they kept up such a stream of bees going and coming that a young bee had no difficulty in circulating around and finding the stream of bees the long distance they were going.

I am building a bee-house 7x40 feet, as my bees are located near a small mill, and water-snakes and frogs are continually among the bees. I think skunks also eat a great number of bees, as there are plenty of them around here. SAMUEL HEATH.

Armstrong Co., Pa., Jan. 23.

CONVENTION NOTICES.

Michigan.—The Northern Michigan bee-keepers will hold their annual convention March 30 and 31, 1904, in the Montague Hall, 127 Front St., Traverse City, Mich.

GEO. H. KIRKPATRICK, Pres.
Rapid City, Mich.

Kansas.—There will be a meeting of the Arkansas Valley Bee-Keepers' Association, at Hutchinson, Kans., Mar. 5, at 10 a.m. All bee-keepers and others interested are respectfully invited to be present. FRED WILBER, Sec.

Utah.—The spring convention of the Utah Bee-Keepers' Association will be held April 5, at 10 a.m. and 4:30 p.m. Among other important questions to be considered will be the World's Fair, our State Fair, and the Portland Fair of 1905. We also desire to formulate some plan, if possible, to further increase the fraternal interest for the mutual benefit of our bee-keepers. We cordially invite all bee-keepers to be present. We also invite them without delay to send in their views on these and other topics. The convention will be held in the City and County building, in Salt Lake City.

Salt Lake City, Utah. E. S. LOVESY, Pres.

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Modern Farmer	$0.50
Western Fruit Grower	0.50
Poultry Gazette	0.25
Gleanings in Bee-Culture	1.00
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Good 8-Frame Hive, $1.00
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9C4t R. D. 3. JACKSON, MICH.

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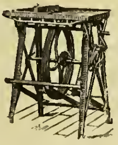
Read what J. I. PARENT, of Charlton, N. Y., says: "We cut with one of your Combined Machines, last winter, 50 chaff hives with 7-in. cap, 100 honey racks, 500 brood-frames, 2,000 honey boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.
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We need a few thousand pounds more of Comb Honey for our trade in St. Louis and Chicago. Any person, any where, who wants to cash up his Honey Crop at a wholesale price, we would be pleased to hear from, with complete description and lowest price delivered to their depot. West of Kansas City and Omaha it should be in car-lots.
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WANTED! FANCY COMB HONEY
In no-drip shipping-cases. Also Amber Extracted in barrels or cans. Quote your best price delivered Cincinnati. The Fred W. Muth Co.
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WE SELL ROOT'S GOODS IN MICHIGAN
Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Four percent off for cash orders in December. M. H. HUNT & SON,
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Your wants fully supplied with anything needed in the Apiary. FULL STOCK OF A. I. ROOT CO'S GOODS; Danzenbaker Hives, etc. Let us mail you our 40-page Catalog. FREE.
JOHN NEBEL & SON,
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BINGHAM'S PATENT Smokers
25 years the best.
Send for Circular.
25Atf T. F. BINGHAM, Farwell, Mich.
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HONEY AND BEESWAX
MARKET QUOTATIONS

CHICAGO, Feb. 8.—The demand is better for all grades of honey than at any time since the beginning of December of last year. Stocks are now being reduced, but at the same time prices are easy. Many have had it so long that they are anxious to make sales. No. 1 to fancy white comb honey sells at 12@13c; amber grades, 10@11c; dark, etc., 9@10c. Extracted, white, 6@7c, according to quality, kind and flavor; amber, 5@6c. Beeswax, 30c.
R. A. BURNETT & CO.

CINCINNATI, Feb. 8.—There is a fair demand for honey, but nearing the end of the season for comb honey, with large supply, has pressed the prices; fancy white, 13@14c; amber, in barrels 5¼@5¾c; in cans, ½c more; alfalfa, water-white, 6@6½c; fancy white clover, 7½@8c. Beeswax, 30c. C. H. W. WEBER.

PHILADELPHIA, Feb. 8.—There has been a decided decline in comb honey since last quotations. Bee men who have little lots held back and are afraid they can't dispose of it before warm weather, are shipping it in, selling at any price they can get, breaking the market decidedly. We would quote fancy white at 14@15c; No. 1, at 12@13c; amber. 10c. Extracted, white, 6@7c; amber, 5@6c Beeswax, 31c. We are producers of honey and do not handle on commission. WM. A. SELSER.

CINCINNATI, Feb. 16.—The honey market at present is dull, and lower prices would not induce sales, which, no doubt, is due to the continued cold. We hope to make a better report when the weather moderates. We offer our amber extracted honey in barrels at 5½@6½c, according to quality; white clover, 6½@8½c. Fancy comb, at 14@15c, in a small way. Beeswax, 30c. THE FRED W. MUTH CO.

ALBANY, N. Y., Feb. 1.—Honey demand very light. Prices of comb honey are largely now what the buyers will offer—from 10@15c. We look for better demand when weather is warmer. Extracted doing some better at 7c for white, 6½c for mixed, and 5½@6c for dark and buckwheat. Beeswax, 28@30c.
H. R. WRIGHT.

BOSTON, Feb. 9.—There is little change to note in the honey market. Strictly fancy Eastern honey is scarce. Western honey will not bring as much here. We quote fancy white in glass-front cases at 16c; No. 1, at 15c. Supply is ample, and demand light at this time. Extracted, water-white, 8c; light amber, 7@8c; with but little call for dark Florida.
BLAKE, SCOTT & LEE.

KANSAS CITY, Feb. 24.—There is no change in the price of comb honey; the supply is large. The receipts of extracted are large and the demand very light. The market price is: Fancy No. 1, comb, 24 section cases, $2.25; No. 2 stock, $2.00. Extracted, white, per pound, 6@6½c; amber, 5½@6c. Beeswax, 30c.
C. C. CLEMONS & CO.

NEW YORK, Feb. 27—Demand for comb honey has slackened off considerably, and while there is some call for white, receipts are heavier than the demand and in quantity lots, quotation prices are shaded more or less. We quote fancy white at 13@14c; No. 1, at 12c; amber, at 11c. There is no more demand for dark honey whatsoever, and we would not encourage shipment of this grade. Extracted honey is quiet at unchanged prices. Beeswax in good demand at from 28@30c. HILDRETH & SEGELKEN.

SAN FRANCISCO, Feb. 17.—Extracted, white, 5½@6c; light amber, 4½@5c; amber, 4@4½c; dark amber, 3½@4c. White comb, 12½@13c; amber, 9@11c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

The steamer Newport, sailing on Saturday, the 6th, took 115 cases extracted honey for New York. Local demand is light. Extracted is not in heavy spot supply. The prospects of an early cleaning up of comb honey are not at the moment particularly encouraging.

HONEY AND BEESWAX
When consigning, buying or selling, consult
R. A. BURNETT & CO.,
199 SOUTH WATER ST. CHICAGO, ILL.

Wanted to Buy! 100 colonies, or less, of BEES for SPOT CASH, in or near Northampton Co., Pa. State kind of hives used and price wanted. Crystal Poultry Yards,
88 So. Franklin St., WILKESBARRE, PA.
8A4t Please mention the Bee Journal.

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are no better than those we make, and the chances are that they are not so good. If you buy of us **you will not be disappointed. We are undersold by no one.** Send for new catalog and price-list and free copy of THE AMERICAN BEE-KEEPER; in its thirteenth year; 50 cents a year; especially for beginners.

—THE—

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JAMESTOWN, N. Y.

W. M. GERRISH, Epping, N.H., carries a full line of our goods at catalog prices. Order of him and save the freight.

ST. LOUIS, 1904.

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Catalog Free.
A No. 1 Smoker by mail, $1.

Bees, Honey and Beeswax bought and sold for cash.

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Manufactures and carries in stock every article a bee-keeper uses. BEES AND QUEENS IN SEASON.
Apiaries—Glen Cove, L.I. Catalog free.

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FOR SALE—600 colonies from the Virginia apiaries belonging to the estate of the late Capt. J. E. Hetherington. These bees are Carniolans, bred from carefully selected queens, are perfectly healthy, and in the Hetherington-Quinby hive. They have had the personal care of Capt. Hetherington. For further information address, H. B. HETHERINGTON,
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IF YOUR BREACHY STOCK

has hooked, jammed and banged your wire fences to pieces; you ought to buy Page Fence next time.
PAGE WOVEN WIRE FENCE CO., Adrian, Michigan.

E. E. LAWRENCE, DONIPHAN, MO.
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Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

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OF ALL KINDS.

Langstroth on the Honey-Bee—Revised
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

DADANT & SON, Hamilton, Hancock Co., Ill.

Your Bees Won't Sting You
IF YOU GIVE THEM LEWIS' GOODS.

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Everything the Bee-Keeper Needs.

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ALLEN LATHAM.

Priority of Location.
DR. C. C. MILLER.

AMERICAN BEE JOURNAL

WEEKLY—$1.00 A YEAR.

Published by GEORGE W. YORK & CO., 334 Dearborn Street.

44th Year. CHICAGO, ILL., MAR. 10, 1904. No. 10.

ONE OF SIX OUT-APIARIES FORMERLY BELONGING TO MR. M. A. GILL, OF BOULDER CO., COLO.
(The trees in the background are cottonwoods.)

THE VOICE OF THE PEOPLE

DANZENBAKER'S HIVE.

THE A. I. ROOT CO. MEDINA OHIO

MORE HONEY. BETTER PRICES.

WE HAVE TOLD YOU SOME THINGS
—ABOUT THE—
DANZENBAKER HIVE
FOR COMB HONEY.

NOW SEE WHAT OTHERS SAY.

MORE HONEY.

UNION BRIDGE, MD. Feb. 9, 1904.

The A. I. Root Co., Medina, O.

Gentlemen:—I saw in a recent issue of your paper that you have a department called "Reports Encouraging." I shall send you my report.

I use the Danzenbaker hive and will give you report of the same, as the few dovetailed hives that I use do not compare at all with the Danzenbaker. One colony gave me over one hundred pounds No. 1 white honey and the rest averaged about sixty, with an increase by natural swarming of one hundred per cent. A friend of mine who uses all sorts and kinds of hives in his apiary succeeded in making scarcely enough honey to pay for the foundation used in the sections. This was about two miles from my apiary. Long live the Danzenbaker hive! It is just the thing for this locality.

Yours truly,
J. B. HOLLOPETER.

MALLET CREEK, O., Sept. 25, 1902.

I have now 250 colonies of bees, of which 170 are in the Danzenbaker hives, and shall have all my bees in Danzenbaker hives next spring. During this past poor season, 30 or 40 of the colonies in the Danzenbaker hives gave over 100 lbs. surplus. On the average I get more than double the amount of honey from these colonies that I do from those in the old chaff hives. With a 7-inch telescopic cover, the Danzenbaker hive winters the bees better than the chaff hives.

VERNON BURT.

MORE HONEY AND BETTER PRICES.

I have used both square and tall sections in all my apiaries five years, and know from practical experience that it will pay to discard the 4¼ sections, and use only 4x5 sections, and the Danzenbaker hive with the fence separator. They have made enough more this season in the same yard to pay for the hives. I have made *more money* this season per hive than I have any previous year in my 15 years of bee-keeping. Fifteen of my strongest Danzenbaker hives made me a ton of honey. When it comes to sales I get more for the 4x5 sections, and have no work in cleaning them. I ship them as I take them from the super. This is not the case with the 4¼ section. I make honey to sell, and anything that sells the best, and for the most money is what I want out of the bee-business.

S. D. MATTHEWS.

In Gleanings, p. 931, Dec. 15, 1899.

MOUNTAIN VIEW, N. J., Oct. 6, 1897.

I have run my hives largely with the Danzenbaker sections this year, and shall increase my facilities for the Danzenbaker output next year. I sold all my fancy clover in Danzenbaker sections, glazed, to two fancy grocers in New York, at 20 cts. a section; were retailed at 25 cts. each. My 4¼ sections, unglazed, sold to grocers at 12½ to 13 cts., retailing 16 cts. I furnished cartons with the 4¼, which cost nearly as much as glass.

B. F ONDERDONK.

BETTER PRICES FOR DANZY. HONEY.

ROCK VALLEY, N. Y., Feb. 22, 1901.

My bees gathered no surplus after July 1. I had only 1200 lbs., but I obtained a fancy price—15½ for "Fancy" and No. 1 white, and 14½ for No. 2 here at my station for all the Danzenbaker 4x5 plain sections, used on your hives, while I got only 14 and 13 cts. per lb. for the 4¼x4¼ square sections, and I consider that much difference is worth looking after—don't you? The Danzenbaker hives doubled up, two brood-chambers, are in fine condition, even better than my double-walled hives. I intend to build a bee-cellar and work off my double-walled hives as fast as I can, and get the Danzenbaker hives. Very truly yours,

J. L. HAIGHT.

It is not claimed that so large an advance in price as is mentioned above can usually be obtained for honey in Danzenbaker sections, but because it is more uniformly fancy grade, and of general better appearance it commands the highest prices and a more ready sale in a dull market than ordinary honey.

A RECENT ORDER.

INDIANAPOLIS, IND., Feb. 3, 1904.

The A. I. Root Co., Medina, O.

Dear Sirs:- Please ship to me as soon as convenient: 500 Danzy. AD64M hives. Yours,

WALTER S. POUDER.

(This is in addition to all other orders.)

64-PAGE BOOK.

Mr. Danzenbaker's little book, "Facts About Bees," containing 70 pages, giving full particulars regarding this hive and system, is indeed full of facts. If one follows the directions clear through, he is sure to produce a strictly first-class article of comb honey, providing of course there is any honey to be had. This unique little book will be sent free to all who apply for it.

Bee-keepers are raising honey for the money there is in it, or for the pleasure they get out of it. It is conceded by all who have tried this system that it is highly profitable. Reading over letters from the users of this hive who tell of securing large crops of honey almost free from propolis makes us think that the bee-keeper who is in the business for pleasure would be highly gratified with the hive also. What is more satisfying than to take off well-filled supers of snow-white sections free from the propolis that is so often found on sections in cases that are poorly constructed and adapted for the production of a fancy article?

SPECIAL NOTICE.

The great popularity of the Danzenbaker hive has brought the shallow brood-frame and the tall plain sections into prominence. It must be remembered that no other hive contains the essential features of the Danzenbaker. The success of this system depends on having everything just right, so you should place your order for the Danzenbaker hive with our main office, or any of our branches or regular agents.

THE A. I. ROOT COMPANY,

BRANCHES: Main Office and Works, Medina, Ohio, U. S. A. BRANCHES:

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(See list of Jobbing Agents in American Bee Journal, Jan. 7, page 2.)

Established in 1861

AMERICAN BEE JOURNAL

The Oldest Bee-Paper in America

Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

GEORGE W. YORK, Editor. CHICAGO, ILL., MAR. 10, 1904. Vol. XLIV—No. 10.

Editorial Comments

334 Dearborn Street.

This is our new number and street. We moved the office of the American Bee Journal March 3. We are now in a modern office building in the heart of the business district of Chicago. Our editorial office is Room 990 of the Caxton Building. Our friends and subscribers are invited to call and see us at any time in our new office.

Again permit us to call the attention of all to the fact that we are not now in the bee-supply, honey or beeswax business, and have not been since Oct. 1, 1903. We are devoting our time and attention to the weekly American Bee Journal.

The Apiarian Outlook for 1904.

The outcome of the harvest can better be considered some months hence, but bee-keepers are a folk somewhat given to looking ahead, and a look at the horoscope may not be amiss. The prospect is neither all bright nor all dark. California is short on rainfall, and unless there is a heavy fall of spring snows upon the mountains, or an unusual amount of rain next summer, Colorado will also lack the necessary moisture for a heavy crop. In the northern portions of the country the cold has been remarkably severe, and what is still worse, it has been exceptionally uninterrupted, so that a very large number of colonies will fail to respond to spring roll-call.

On the other hand, notwithstanding the severe cold, a mantle of snow has covered a large portion of the country where white clover abounds, and what bees are left will be likely to give a good account of themselves, and their hoardings will not be likely to lack a market. In those portions where there has been no trouble wintering, and where at the same time bee-pasturage is abundant, a year of unusual prosperity ought to be experienced.

In any case, the bee-keeper who bends every energy to do the best he can with what remains may hope for a fair recompense for his labor.

The Bacillus of Foul Brood.

As mentioned some time ago, Dr. Lambotte of the University of Liege, announced that he had discovered that the bacillus of foul brood—bacillus alvei—was identical with bacillus mesentericus vulgaris, which is abundantly distributed everywhere in Nature. Fresh interest in the matter is awakened by the long article appearing on page 132 of the Bee Journal, written by C. H. W. Weber. Mr. Weber has been an enthusiastic advocate of formaldehyde for the cure of foul brood. Puzzled by the reappearance of the disease after treatment in some cases, he finally accepted as the explanation that in spite of cure the disease reappeared again by means of mesentericus vulgaris.

If there are lurking everywhere germs capable of producing foul brood, only awaiting favorable conditions to begin their deadly work, we may as well accept the fact with what grace we may, but it will be an unwelcome fact that makes us believe that the seeds of the disease are everywhere instead of being, as has been heretofore believed, only found in colonies of bees suffering from foul brood. So it may be well to comfort ourselves with looking for some reasons why we should not believe Dr. Lambotte is correct.

If correct, he ought to have succeeded in producing foul brood by means of the common bacillus that he believes to need only a slight change to become bacillus alvei. This he failed to do.

If his conclusions were correct, other scientists should have confirmed them. A considerable time has elapsed since September, 1902, but no other bacteriologist is reported as having confirmed Dr. Lambotte's conclusions. On the contrary, men of ability have expressed their disbelief, saying that the great similarity between the two kinds of bacilli might easily mislead Dr. Lambotte.

There are apiaries—thousands of them—located where foul brood has never yet been known, and foul brood is by no means a scourge of modern times. Is it easy to believe that through all these years there should have been no occurrence of conditions favoring the appearance of the disease? Yet that might happen more easily than that a whole county should remain up to this time immune. And larger tracts than that, even whole countries, have remained free from the disease. There have been cases where it could not be understood that the disease had been brought from elsewhere, and these might be adduced in support of Dr. Lambotte's theory. But it is easier to believe that the germs had been in some unusual way brought from elsewhere than to believe that over so large a scope of country mesentericus vulgaris could for so many years have abounded everywhere without ever having found a single colony of bees in which conditions would allow it to produce foul brood. Cases of smallpox occur sometimes where it is impossible to trace their origin, but we do not the less believe that they have come from some other case of smallpox.

Under the old belief, foul brood was bad enough. Under the new it is much worse. Let us not believe the new theory till we have to. As yet we do not have to.

Summering Bees in Winter.

"Bees are summering very nicely in Colorado this winter, thank you."—Rocky Mountain Bee Journal.

Now see how this wild-and-wooly-west editor doth seek a quarrel with those of us who are wondering whether any of our bees will pull through this never-to-be-forgotten winter.

Michigan Farmers' Institute.

A brief report of the annual Farmers' Institute, published in the Chicago Record-Herald, has the following:

> Bee-keeping and horticulture were the subjects discussed at the morning session. W. Z. Hutchinson demonstrated that bee-keeping is profitable under proper management. Prof. U. P. Hedrick declared that bees do not injure fruit, as many suppose, and that bee-keepers and horticulturists are mutually dependent upon each other. George E. Rowe made the statement that he would not dispose of his bees if they never stored a pound of honey, because of their advantage to fruit. He considered the damage done to bees by the spraying of trees far less than is usually supposed.

Calling for Honey at Hotels, Restaurants, Etc.

When on the way to the Wisconsin State convention at Madison recently, we had occasion to patronize the dining-car. On the bill of fare we noticed honey. We inquired of the courteous waiter, whose honey they were serving. He replied that he did not know, but would see. He stepped to his "pantry," and looking at the label on the jar of honey, he said, "George W. York's." We said we would try some of it. He brought out a jar that was nearly empty, containing a long-handled spoon with which to dip it out. So with excellent brown bread and "York's Honey," and some other things, we had a good meal.

We may say that we could not resist the temptation to give the colored waiter our personal card when he placed the honey on the table. You should have seen his eyes bulge out when he saw the same name on the card as appeared on the honey-label. He added, "Well, sah, dat honey am all right, sah, anyway." We told him that we knew it was absolutely pure.

At the hotel in Madison we also called for honey, and were served with some of Wisconsin's best comb honey.

What we wish to suggest is, that whenever bee-keepers are away from home, and it is necessary for them to patronize hotels, restaurants, etc., they should always call for honey. It may very often occur that they will not get it, but it will do no harm to ask for it, and, if such requests are repeated, those who are in charge are more than likely to serve honey later on.

Honey should appear on every bill of fare that is printed for use in any hotel or restaurant. We know of no better way to help bring about such a reform than for bee-keepers to make repeated requests for honey when eating in public places.

Corrections in Average Yields of Honey.

Two errors have been noted in the list of "Big Average Yields of Honey," page 51. The average of Dr. C. C. Miller is put down at 231. According to the General Manager's report it should be 169. Even with the corrected figures as given on page 4, it should be only 223.

The other error is the omission of Otto Sueltenfuss, of Texas, from the list. Mr. Sueltenfuss writes:

> "In the spring of 1903 I increased, by natural swarming, to 34 colonies, and extracted from that number, too. The yield of extracted honey was 2760 pounds, as in the General Manager's report. But the 1260 pounds of bulk comb honey were taken from 24 of the colonies. Now, if 100 pounds of comb honey are estimated as equaling 150 pounds of extracted, then my average yield per colony would be 159 pounds. If the comb had been yielded by the 34 colonies, then the average would be 136 pounds per colony. Isn't that right?"

Evidently the 159 pounds average is obtained by dividing the extracted among the 34, and the comb among the 24, and then adding together the two averages. That will hardly do, for it would be getting only the average of the 24 colonies. Neither would it be correct for them, for it would be assuming that each of the 24 stored as much extracted as each of the remaining 10, and the comb honey besides. The correct amount is to be obtained after this fashion:

Adding 50 percent to the 1260 pounds of comb honey to reduce it to extracted honey gives 1890 pounds, and adding to that the 2760 pounds makes 4650 pounds, and for 34 colonies that would be an average of nearly 137 pounds.

Miscellaneous Items

Mr. J. Q. Smith, of Logan Co., Ill., was the first bee-keeper to call on us in our new office at 334 Dearborn St., March 4. Mr. Smith is the inspector of apiaries for Illinois, and also President of the Illinois State Bee-Keepers' Association.

* * *

Samuel Wagner, as a great many of our readers know, was the founder and first editor of the American Bee Journal. Mr. A. I. Root, in a recent number of Gleanings in Bee-Culture, tells something about Mr. Wagner and his work, which is at once so interesting and of such historical value, that we are glad to copy it in these columns. It is as follows:

> In the introduction to the "A B C of Bee-Culture," I have told about getting acquainted with Mr. Wagner through L. L. Langstroth. About as soon as I had looked over the literature of that day, and found what had been done with the honey-bee, I learned from my good friend Langstroth that an American bee-journal had been started, and that Samuel Wagner kept it going one year, and then, through lack of encouragement, together with the breaking out of the American rebellion, it was discontinued. I at once wrote to Mr. Wagner, and a very pleasant correspondence ensued. A copy of the first volume, started in January, 1861, and kept up till December, was secured from him, and was read over and over again. More especially was that part of it read and re-read pertaining to the Dzierzon theory. I urged Mr. Wagner to re-commence the journal, which he did in July, 1866, and I with others very soon became a regular contributor to its pages. I am pleased to notice that one of the advertising sheets has been preserved in our bound volume; and among the advertisers I see H. A. King & Co., Nevada, Ohio; C. P. Bigelow, Perkinsville, Vt.; Adam Grimm, Jefferson, Wis.; A. Gray, Royal, Butler Co., Ohio, and W. A. Flanders, Shelby, Ohio.
>
> Very soon I began to talk about comb foundation made of wax; and my good friend Samuel Wagner was enabled to send me a piece of foundation, or "artificial comb," as we called it then, made of black rubber. I think the impression was made by setting up types made of ordinary type-metal.
>
> Information came in somewhere about 1867 of a comb-emptying machine, and from directions I got from friend Wagner I soon had a machine made, all of metal instead of wood, as the Germans made them. Langstroth briefly described the German machine in a circular put out in 1867.
>
> While I was at work on comb foundation and the honey-extractor, both Langstroth and Wagner encouraged me, and gave me all the information they could obtain in regard to the matter. Many of Wagner's letters during those years seemed to me of more value than the articles with which he used to fill the pages of the American Bee Journal. It seems to me unfortunate now that I did not save them. Wagner (*unlike* your humble servant) kept himself and his personal affairs very much out of sight in his editorial work. The pages of the old American Bee Journal, away back, were principally occupied by contributors. He very seldom added a footnote, nor interfered unless we got to bearing on each other a little too hard. On one occasion he administered quite a sharp reproof to "Novice;" but it was a little paragraph at the end of my communication that he might have meant myself or any or all of the rest of the correspondents. When it came to exposing swindles Mr. Wagner came out pretty severely and plainly. But there were only a few occasions on which he did this.
>
> The American Bee Journal for March, 1872, announced the sudden death of our beloved editor. The article was written by Father Langstroth, who was at the time paying a visit to his old friend, Mr. Wagner. These two, Langstroth and Wagner, were a pair of God's noblemen. As I look over the pages and recall the past, I fall to wondering whether we have any, *just* such as they were, left. May be not exactly like them, but God forbid it should ever be said truthfully that the good men—the real *noblemen*—are *all* dead and passed away.

It is an inspiration to us to know that the founder of the old American Bee Journal was such a noble man. We wish we knew more about him. He doubtless had a hard struggle with his new venture. It certainly was a risky undertaking. It has ever been so since then, to start a new bee-paper, as most of those who have done so could testify. The fact is, the field is too limited to give sufficient support in order to publish successfully more than three or four really good papers, as experience has abundantly proven.

We wish here to thank the publishers of Gleanings in Bee-Culture for giving, in their excellent periodical, the paragraphs we have copied in reference to our honored and honorable predecessor.

* * *

Chayote as a Honey-Plant.—We have received the following from Mr. W. A. Pryal, which will be of interest to all:

> In looking through the Saturday Evening Post of Dec. 5, 1903, I came across an article that attracted my attention. It was about that phenomenal plant called the "chayote," which, at first glance, might be supposed to be some relative of our famous coyote. The latter is a good-for-nothing beast of small size, of the dog or wolf kind—the other is a plant, as mentioned. So there is no relationship. But to be serious, the chayote is a wonderful member of the vegetable kingdom, if we are to believe all the good things that are said of it in the article mentioned. It is good for man and beast as a food. The writer says "its practical uses are endless." I should judge it is a tuber sending forth a vine that bears pear-shaped fruit, and blooms and ripens fruit every month in the year. In a few months after planting, the vines will yield as many as 500 fruit, some weighing no less than three pounds. This is all very fine, and would induce us to try the plant right off. It is going to be sent out, no doubt, ere long, by our Uncle Samuel's seed and nursery department. Let's get a few plants!
>
> But, ye bee-keepers, this is not all! Lo! and behold it is the very plant bee-keepers have been looking for these many years to fill a long-felt want—and their honey-barrels, too. This, I believe to be so from reading between the lines of the Post article. It states that the plant is especially valuable to our fraternity, as it is wonderfully rich in nectar. I have not been quoting verbatim, but just sufficiently to let you know what a great plant this chayote is. Why have not the bee-papers noticed it before? Or have they done so and I have overlooked such fact?
>
> Chayote is a native of a tropical country, and may possibly be grown in the more southern of the Southern States, and the warmer portions of California and Arizona. Let's watch the chayote. Who will send the first car-load of such honey to market?
>
> We have had more rain—a whole day at a stretch again. It stopped last evening. To-day was another of God's own charming days.
>
> W. A. Pryal.
>
> San Francisco, Co., Calif., Feb. 25.

Some months ago we published something about the chayote, written by Kate V. Austin. Who can tell us something definite about its nectar-yielding qualities? If it is what Mr. Pryal intimates, bee-keepers will want to get it wherever it will grow.

Convention Proceedings

THE COLORADO CONVENTION.

Report of the Proceedings of the Colorado State Bee-Keepers' Convention, Held in Denver, Nov. 23, 24, and 25, 1903.

BY. H. C. MOREHOUSE, SEC.

(Continued from page 168.)

A WESTERN HONEY-PRODUCERS' ASSOCIATION.

H. Rauchfuss—Is it not feasible for us to have a Western Honey-Producers' Association among the bee-keepers of the West—Colorado, Utah, New Mexico, Nevada, and California? The National organization is a little slow, and the Eastern States are not ready. If we wait for all the States, they never will get ready.

QUES.—"What is the most hopeful line of action in decreasing the cost of honey-production?"

Mr. Morehouse—One of the most hopeful fields is in intensive bee-keeping, in getting more out of each colony of bees.

H. Rauchfuss—I think we now well know how to produce honey. It is a more serious question how to dispose of honey than how to get it. Much is on the market now that should have been sold long ago. Co-operation will help a great deal to attain that point, and it will help in producing the honey as well as in selling it.

F. Rauchfuss—Which is the more profitable, intensive bee-keeping, or running a large number of colonies?

Mr. Morehouse—I can not answer by experience, only by analogy. In other lines of production, in farming and the like, it is now pretty well demonstrated that working over a small area is more profitable. I think the time is coming when 400 colonies will produce as much as a thousand, and more.

F. Rauchfuss—A Nevada man, who called at the store, told me he had 780 colonies in two yards, and his brother had 1200 colonies in a number of yards, and the proceeds from his own bees far exceeds that from his brother's bees. He produces comb honey while his brother produces extracted, but still he gets a low price for his comb honey.

Mr. Aikin—When we are properly organized for distribution, I think intensive bee-keeping pays better. Up to the present I have lacked in distributing facilities, owing to the long distance from a market, and so have branched out more. With better distributing facilities there is more profit to small producers, and intensive methods come into play. I have for a number of years been endeavoring to reach out so as to succeed in marketing by sending enough at a time to reduce the freight-rates. There is a better opportunity now for extension in both lines.

H. Rauchfuss—I move the chairman be instructed to appoint a committee to confer with other local organizations of other States, and find out whether it is feasible for us to form an organization of the Western States. [Carried.]

Mr. Aikin—It is not out of place in this convention to consider the business end of the question. One might say the proper place for its consideration is with the Colorado Honey-Producers' Association. But, after all, in one sense the Honey-Producers' Association and the State Association are not separated. Their distinctive features are, that one is literary and one is for business. The proper channel, of course, through which other organizations accept our plans is through the business branch of our organizations. The people of the Western Slope are to come in as a branch of the Colorado Honey-Producers' Association. It is true, there is a difference in the handling of bees there, but there is no difference in the business handled.

H. Rauchfuss—It is not my idea for the Colorado Honey-Producers' Association to be the head and the others merely branches, but that all should be together. This is just to express our feelings, and get our members to take an active part.

The chair appointed as the committee, H. Rauchfuss, F. H. Hunt, J. N. Pease, H. C. Morehouse, D. W. Working, and F. L. Thompson.

As a committee on the manufacture of supplies to report at the next meeting, were appointed H. Rauchfuss, F. H. Hunt, and H. C. Morehouse.

STIMULATIVE FEEDING OF BEES.

"What is the best method of stimulative feeding?"

Mr. Hagen—I looked around here last spring for the best hive, and I got it. [Mr. Hagen exhibited the "Acme" hive and its parts.] It has the best cover, and the nicest arrangement for taking off honey by using the inner cover as a bee-escape, and the two covers, in connection with wooden lard-dishes, make the best device for stimulative feeding. I set the lard-dishes on top of the inner cover, and the bees come up through the hole in the center and get the feed. When the outer cover is set on it holds the dishes in place. Another little kink I might speak of is in moistening sections. I always use a spring-bottom oil-can to squirt the water in the right place.

Mr. Hagen also exhibited a Mason jar of strawberries that had been put up in cold honey. These were sampled by the convention, and found to retain the flavor of the fresh strawberry to a remarkable degree.

SINGLE-TIER VS. DOUBLE-TIER CASES.

F. Rauchfuss—I have been requested by several to compare the relative merits of single-tier and double-tier shipping-cases. We have had a good deal of experience in receiving shipments of honey in single-tier cases. It always ships poorly, and especially so in local shipments. The freight classification rules require that the glass be covered. On account of the shape of the case the average freight handler does not know what is in it, and as he always has a stick in his back, he drops the case to the floor instead of stooping to set it down. The effect on the section combs may be imagined. He is likely to know what is in the double-tier case, and on account of its shape, if he does drop it, it does not drop so far. He frequently steps on a case to reach up to something. If it is a single-tier case the cover gives to such an extent as to cause his weight to come down with but little diminished force on the tops of the sections, causing them to give in turn, so that the combs are slightly squeezed, and the honey oozes out. If it is a double-tier case the cover does not give near so much, and some part of his weight is likely to come over the edges of the case anyhow, and thus be supported without doing harm. When transported on express and transfer wagons, the single-tier case is much more likely to be set on its side edgewise to fill up some convenient space in the wagon, which is the worst possible position for the combs within, when the load is being bumped over the streets. On the grocery shelves the single-tier case occupies more space and displays less honey. The double-tier case meets grocery requirements the best. As to the objection of two tiers, there should be paper between the two tiers, and no leaky honey should be put in. The proof of the pudding is in the eating. We have had inquiries for car-load lots of double-tier cases. When I was East visiting the honey-buyers in all the large cities of the middle West, I made it a point to inquire if there were any trade objections to the double-tier cases, and found none.

Mr. Aikin—I have had bad luck in shipping in single-tier cases. One reason was that they were so often stood on one side. But the others, being more nearly in the shape of a cube, were rarely set that way.

H. Rauchfuss—The double-tier case has a small surface, and twists easily when forces are applied at different points. When that happens the sections inside are twisted, too, and the combs slightly fractured.

GRADING HONEY.

Mr. Hagen—I have always been careful about grading honey. I notice the Denver commission houses sell a good deal of cheap honey at 25 or 30 cents a case less than a first-class article. I have sold a number of car-loads, and would always guarantee every section in a case to be No. 1 that was sold as such. I made it a rule to put in the second grade anything that was under 14 ounces, or off color. I had another grade for 12 and 13 ounce honey, and anything less than 12 ounces was sold after melting it up. From 80 pounds of cull honey I would get in the neighborhood of 6 pounds of wax. I aimed to have bait-combs. Bee-keepers ought to be educated to have two grades.

H. Rauchfuss—If you have three or four sections in a case that are not quite up to the standard, leave them out and put them in a separate case. You may get 10 cents a case more for the sections that are left. And that is not all. You may have three or four sections per case in the second grade that are almost too good for the second, though not quite good enough for the first, so that you raise the average, and probably the price, on the second grade, too, and thus raise the price on them both. Another point in grading is always to use the same standard throughout the season. The honey is white when you first take it off, but the last taken off is not so good, and you are apt to think the last as good when it is not, and thus have a different standard in your mind at the end of the season. Thus, what you put in the first grade at the end of the season may not be so good as that graded second at the beginning of the season. By selecting certain sections as patterns to go by, and keeping them on hand throughout the season, you may always *preserve the same standard.*

(The End).

Contributed Articles

The Standard Section—What Will It Be?

BY ALLEN LATHAM.

TO a large extent the standard section will be the one which by chance or otherwise gets to be used by the majority of honey-producers, and may not of necessity be the most desirable. For years the standard section has been the 4¼x4¼ of indefinite width, but now the bee-supply people are striving (whatever their purpose may be) to make a taller and a narrower section become popular.

There has come into use also the plain section. This seems to be an excellent thing, and will probably grow in favor. Only time will determine whether it will entirely supersede the bee-way section. For the purpose of argument I will assume that the plain section is in a few years to be our only section. If so, it is of prime necessity that the section of the most desirable dimensions come to the front.

Let me speak first of the shape. Shall the section be square or oblong?

Is it any argument in favor of a tall section to say that our doors and windows are usually taller than broad? I fail to see any good reason there. Probably not one person in one hundred would think about such a matter, and surely not one in a thousand would let his purchase be affected.

It is argued that more surface is presented by the oblong. This is true in the case of the 4x5. The difference is too trifling.

It is further argued that more sections can be set on a given surface. True, but the desirability of such increase is not proved. The increase in depth of super may retard the bees in their taking possession of the same. Many a person would say: "Give me a shallower section still for rapid super-work."

It is also argued that bees build comb downward faster than sidewise. Is this of any value where full foundation are used? And by the way, where do most sections show lack of finish, at the sides or at the bottom? A toss up.

"A tall section will bear shipping better," may be true, but if so it is not so much owing to the height as to lightness of honey and increased amount of wax proportionally. Remember that most of our tall sections are thin.

In the reasons offered above there is much truth but little weight, by far too small amount of weight to call into popular use a section which has so many disadvantages.

First of all, the tall section is harder to handle. It breaks easily. It tips over easily. The increased comb-surface renders it especially liable to injury and consequent leakage. These reasons alone would prevent my adopting the tall section.

The argument that more can be put into a super almost captured me. But analysis of the statement dissolved that impression. The increased number means increased space, and increased space means delay in taking possession of supers. With tall sections the second super will not go on till after the second super of shallow sections has work well progressed, so that in the end there is loss.

Of course we can not gainsay that tall sections bring more in certain localities. Round sections would probably out-sell either, and sections of all sorts and shapes, especially alphabet sections, would have a great run. If we only knew how much of this sale was to be laid to the account of fad we should know more about it.

Every one is free to choose, and some will probably vote for the tall section. I believe that most of us after giving each a good trial, will raise both hands for the square. I, for one, am too clumsy to use a section which has such unstable equilibrium, and should ruin enough choice sections to cut a big hole in any better price they might command.

The second part of my subject is more important by far. What shall be the thickness (usually termed width) of our standard section? Assuming that the 4¼x4¼ is standard, shall it have for its other dimension 1½, or more?

I am told on the best authority that this section, when only 1½ inches wide, will hold only 15 ounces of honey even when the bees are crowded for room, and that it usually runs down to 13 or 14 ounces. Do we wish this? These sections are called, and will be called, *one-pound boxes of honey.* Do we, as bee-keepers, who pride ourselves upon our honesty and square dealing, wish to do this?

What if honey-*dealers* do say that they prefer light weights, as some say they do? Shall we be dishonest because they prefer that? Perhaps we are not dishonest, but we surely make it easier for some one else to be. I should like to say right here that a few years ago I had much dealing with a certain honey-firm, and this honey-firm was strongly in favor of full weights.

I wish to protest strongly against a section which is under weight. I wish that every other bee-keeper whose honesty responds to these words would send in his protest.

It will never be possible to produce section honey with just 16 ounces to a section, but it is possible to use such a section that there will be as many 17-ounce sections as there are 15-ounce ones. I believe that any loss in number of sections produced will be more than offset by our steadier sales of honest-weight product.

If, then, bee-keepers are honest, it is obvious that a section more than 1½ inches wide must be used. Yesterday I cut through a large number of sections, measuring the thickness of the combs. I found that the average full-weight section must be a plump 1½ inches in thickness of comb. Whether this means a section 1 9-16 or one 1⅝ I am at a loss to say. I shall use the 1⅝ section next season. If it proves too large I shall cut it down to what will bring the desired result.

I believe that our standard section is to be 4¼x4¼ by such other dimension as is found by actual use to give average 16-ounce boxes of honey.

New London Co., Conn.

Bill of Rights to Protect Bee-Keepers in Priority of Location.

BY DR. C. C. MILLER.

A GOOD many years ago I got into trouble by saying that I believed there should be legislation that would protect a bee-keeper in his territory. At that time there was little sympathy—indeed, if there was any sympathy whatever with the thought it was left unexpressed; and the general sentiment seemed to be that there was no need to say anything about the matter of encroaching upon territory, because it would regulate itself.

But there seems to be a growing feeling that something should be said, and even that something should be done about it. That feeling was distinctly voiced at the Los Angeles convention, to which Mr. Hasty refers, page 105. The only reply was, in substance, the one Mr. Hasty has worded, "You can't do anything about it." That, however, was an advance over the sentiment of years ago, which seemed to be, "You can't do anything about it, and you ought not if you could."

I have no desire to use space to argue the right of a man to a certain territory as a bee-keeper; the time has gone by for that; but I want to say with what emphasis I may, that whenever bee-keepers are agreed that they want such a law, a law can be framed that will protect a man in his rights as a bee-keeper just as much as the law protects a man in other agricultural pursuits.

Mr. Hasty thinks we should cultivate the doctrine of doing right in regard to every other brother's bee-territory, *require* it of every man that he respect such rights, and suggests that "A carefully worded and forcible declaration of these rights, etc., might be one effective way to do something, in place of doing nothing from year to year." And when such a bill of rights is carefully worded, Mr. Hasty thinks we could depend on public sentiment to do the rest. Very good, Mr. Hasty, as far as it goes; and nineteen out of twenty would respect your "bill of rights," indeed would do so in any case. It's the twentieth man that we're after, and when you say to him: "There's the bill of rights; now respect it or you'll be considered an Ishmaelite and a scamp," he'll coolly say to you: "Consider and be hanged; I care more for the dollars than I do for what you consider me." It is no great compliment to our legal luminaries to say that among them there is not sufficient ability to frame a law that shall embody that carefully worded bill of rights; and that shall say: "There's the bill of rights; now respect it or suffer the penalty attached." Nothing short of that will reach that twentieth—perhaps I ought to say that hundredth man.

The hard part is the careful wording of that bill of rights; when you get it worded it's as easy to enforce it upon the twenty by law as it is upon the nineteen by public sentiment.

Take the case, Mr. Hasty. McHenry Co., Ill.

How I Winter My Bees Outdoors.

BY A. J. KILGORE.

I HAVE a cellar that would answer very well for the purpose of keeping my bees over winter if it were not for the fact that I have a furnace in it for heating the house, and it is difficult to keep the temperature low enough. In fact, I did not think it a possible thing to do to keep the bees in the cellar and use the furnace at the same time, but I see in Dr. Miller's "Forty Years Among the Bees," he is trying the experiment. I think, however, I would best let the veterans try such projects first, and I will continue for the present to winter on the summer stands, which I have been doing up to the present time, with very fair success in a way that I will try to describe:

I use principally the Danzenbaker hives, which are the same in outside dimensions so that the outside winter-case that I use will suit either style of hive. To make the winter-cases, take lumber cut from boxes gotten at the shoe-store and grocery store; these cost from 5 to 10 cents each, and some I get for taking away. It requires about 3 boxes to make 2 winter-cases. I get from the planing mill corner-pieces 1½ inches, outside measure, which cost me about ¾ cents per linear foot; these I use for the corners to nail the boards to, in order to make the case strong, and to have a finished look. These corner pieces are cut 20 inches long, corresponding to the height of the case.

The size of the case is 20x24 inches, leaving 2 inches all round for packing, and from 6 to 8 inches for packing on top. I nail the case together, square it, and then put on the bottom and cover. The bottom, of course, extends in from the sides all around only 2 inches, leaving an opening in the center the size of the hive. The top is made with the joints fitted close but without an effort to making it turn the rain; it is then covered with good tarred paper cut ½ inch larger all around than the wooden cover, leaving no nail-holes to let the rain leak through. The case is now completed, but as you will see, all in one piece. I now rip it in 2 pieces, cutting about 12 inches from the bottom; small pieces about ½ inch square are nailed on each corner of the bottom part of the case on the side extending ½ to ¾ inch above the top of the bottom; these are to hold the top part in place when on.

I move the hive forward about ⅜ inch on the bottom-board and place the bottom part of the case over the hive, letting it rest on the bottom-board. I then take a strip of 2-ply tarred paper 18 inches wide, and long enough to go around the inside of the case and lap 6 or 8 inches. This is put in the bottom part of the case as a lining; this, you will see, will reach up about 8 inches above the top of the hive or honey-board. I use a honey-board 16x20 inches, made by using 2 pieces ⅞x⅞x20 inches, and nail a board from the old box, cut 16 inches long, jointed up close. I now fill the 2 inches between the hive and the case with fine dry planer-shavings, putting 6 or 8 inches on top of the case, and the job is done.

It will be noticed now that the bees have as a protection the walls of the case ⅜ inches thick, a lining next of 2-ply tarred paper to keep out all moisture and wind from the outside, then 2 inches of dry planer-shaving, then the walls of the hive with 6 or 8 inches of dry planer-shavings on top; then covered by a wooden cover to the case with tar paper on top, so it is impossible for moisture from the outside to dampen the packing. I put in this condition in October or first of November, and leave them so until the weather is settled and warm in the spring, say about the middle of April. I then take out the shavings and the tar paper lining, and keep the empty case over the hive during the entire summer; it is some protection from cool weather and damp, cool nights, and from excessive heat on hot days, and by raising the cover a little and blocking it up on the bottom-board it allows room enough for 2 supers. Then I need no hive-covers other than the honey-board and casing cover. I figure the entire cost of each case, when I made it myself: Lumber 15 cents; corner pieces 4 cents; tarred paper 10 cents; total, 29 cents. If painted the cost will be about 10 more.

With a young queen, with colony strong in young bees, and well supplied with good stores and cased as described above, I find my winter loss very small.

Wood Co., Ohio.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Swarming—Introducing Queens—Feeding Bees, Ordering Queens, Etc.

I see Dr. Miller "loves to talk about bees." I just wish he could "lend me an ear" sometimes, for I almost have to resort to talking to myself. My husband says I talk him to death about them, and he "no like" bees. Last summer I had a hearty laugh at his expense. A swarm issued and clustered on a limb just out of reach. I was sick in bed, so my husband was pressed into service (though not at all delighted). He stood upon a barrel and was cautiously sawing on the limb while I watched from the window, when all at once the barrel tipped, which caused him to break the limb, and man, barrel, bees and limb were in one confused heap on the ground. But the man didn't stay there. I could see nothing on him but dust.

I have been studying "Forty Years Among the Bees" this winter, and I intend to try the "foundation plan" for would-be swarms. (By the way, Dr. Miller is my model, and I wish I knew how to make my little boy grow up just like him.)

Last fall, when I had some queens to introduce, I had great difficulty in subduing the bees, though I had handled them minus gloves before that. If I'd open a crack large enough for the nozzle of my smoker they would whiz out like pent-up steam. Smoke? They didn't mind that at all; go down the nozzle riding in a perfect stream of smoke; boil out at the entrance over the hive—anyway to get to me.

I make a note of any question that puzzles me, therefore I am generally ready with quite a string of them. Please answer the following:

1. After finding nearly every comb contained sealed honey to the bottom (the harvest being ended and brood-rearing about over), I concluded they had not where to stick their heads. The next time I had to molest any of them (now you who know a better way are likely to smile, or even laugh) I took a little extracted honey that wasn't nice for table use anyway, and quickly poured it all on top of the frames, replaced the cover, and waited a little. Well, I didn't even light the smoker. (You know lions are generally fed when they roar.)

2. What is best to do with a colony occupying 4 or more frames if found queenless early in the spring, if no queen is on hand to give them? (I don't care to reduce my number.)

3. Would it be safe to order queens from the South in March (I am in latitude of Norfolk, Va.), or can they be obtained of Northern breeders as early as that? If so, from which place would it be best to order?

4. I wish all of my hives to have two stories next spring, but I haven't extra combs for three. What is the best to do, give a story of foundation, putting it underneath the brood-chamber?

5. If I give a new swarm one or two drone-combs, and the rest starters, would they build all-worker comb from the starters? Mrs. C. D. Mears.

1. That was a pretty good way, but why not take the

common plan given by Langstroth 50 years ago, that of sprinkling a thin sugar syrup over the top of the brood-frames. In either case you must be *very careful* not to start robbing, and there is a good deal less danger of robbing when the sugar is used than with the honey. A little honey outside the hive after the honey-flow has ceased, where the bees can get at it, seems to set them crazy after more, and they will act like so many little demons.

You would better watch pretty sharp that none of the honey or syrup leaks out, either through the bottom-board or out of the front of the hive. You can't be too careful about robbing.

2. Unless good queens can be given them, better unite with a colony having a good queen.

3. I think you can get them from the South, but not from the North at that time.

4. Yes, they will work down into the foundation as soon as they need the room, but not so promptly as into drawn combs.

5. With so much drawn-comb as that, there would not be much likelihood of their building more; but full sheets of worker foundation will make a sure thing.

Recipe for Honey-Cakes.

Three pounds of honey, 3 pounds of flour, 1 ounce of *powdered* ammonia, a small teaspoonful of ground cloves, 6 ounces orange peel cut very small, 4 ounces of sweet almonds cut small.

DIRECTIONS.—Pour the honey in a copper or enamelled pan, and set on a stove or quick fire. When it boils, draw it aside and remove the scum (as honey boils up very quickly, great care must be taken not to let it boil over). Then pour the honey into the vessel in which the paste is to be made; leave it to cool; then add flour and other ingredients except the ammonia, which latter must not be added till the flour and honey has been mixed up, and the paste has become quite cold. In preparing for use, place the ammonia in a cup, pour on a few drops of cold water and stir it well so as to form a thick paste, then mix it up with the rest. Then take a piece of the paste, roll it out into a cake not over ¼-inch thick, and cut up into convenient sizes as desired. This done, put cakes on a flat tin (which must be greased beforehand), and bake from 12 to 15 minutes in a hot oven.—British Bee Journal.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

RECORDING HIVE-MATTERS—WINTERING.

I see Mr. Holekamp records hive-matters on a slip of paper and puts it under a brick a-top the hive. Why not use section-sides instead of slips of paper? Then rainy weather can not muss up the record.

His lath gridiron to put over the frames under the winter cushion seems to be an excellent form of the Hill device, and more easily made than the "wooden spider."

Apparently he makes his winter-cases so small as to leave no room for stuffing for the definite purpose of being able to lift them off sunshiny days. That's a very decided advantage; but the question is, Doesn't he pay too much for it? Most of us, if we were to forego the stuffing and packing, would forego making the cases also, and the whole thing would be lost. Page 40.

BEST STYLE OF SECTION.

Not easy to get the answers to the section question into statistical form. Two dodge; two more are not in shape to make their meaning clear; and five more either straddle, or at least do not take a definite position for any one thing. Few, or none, seem to think it very important what section is used. The established style of square section has a younger brother that differs only in being thinner. Two or more want this, and 10 out of 18 wish the 4¼x4¼ section—and thick enough to hold about a pound. Most of the remaining 6 are for 4x5 section. The questions of plain versus insetted, and one-piece versus four-piece, are not very fully taken up. Page 41.

THAT PURPLE-COLORED HONEY.

I'll guess that the purple honey, page 42, was white clover slightly mixed with something else, which, if pure, would be very dark, almost black—only enough of it to make a slight impression on the general flavor.

HATCHING HEN'S EGGS OVER BEES.

So eggs put under a hen felt warm to the hand in about an hour, while over a powerful colony of bees (July) they persisted in feeling cool—not only for one hour, but for 24 hours. 'Pears like the bee-hive-hen idea has got a pretty heavy thump, if not a total knock-out. For such an experiment 25 eggs were far too many. And I guess the burlap and wire gave too much upward (and downward) ventilation. And a colony with the maximum of brood I guess would be much better than a recent swarm. To demonstrate whether or not certain good folks have been fibbing to us a bit, some one in July start some eggs for a week under a hen, and then put three of them over a powerful old colony with cotton batting both under and over them—and the usual top-surface of the brood-chamber either not cut into at all or open only for a few square inches.

In spring, when our hands are cold the undersides of cushions feel very warm; but that (we know when we think a moment) is largely an illusion. Quite likely the actual degrees of temperature are too few by ten or more to start eggs to hatching. If we can't say, "A new way to hatch chickens," let's have it, "A new way to keep eggs fresh." Pages 43-46.

TESTING BOILED HONEY FOR BEE CANDY.

The testing of honey boiled for bee-candy I have always thought to be an awkward thing. Mr. Dadant, on page 53, simplifies it nicely. Touch cold water with your finger and immediately touch the hot candy. When the thin film that adheres is brittle the candy is done. I could do that myself without getting things into a muss.

OBSERVATORY-HIVE BEE-KEEPING.

Interesting to see how an observatory hive can be made to build a new all-worker comb each 24 days. The journal of the observatory hive is interesting also. Wintering 3000 bees on a single comb right in the window—most of us would have predicted failure at that. Also putting a little lamp below them to help out as to warmth in very cold weather, is a "ticklish" operation of which the best said is, "All's well that ends well." And it swarmed twice (not the lamp, but the bees next summer). One would expect an observatory hive to have to have young bees given to it from time to time rather than to be sending out young bees as a swarm. And the feed required for the season was some 20 pounds of sugar. Wish he had explained a little why he is so very urgent in favor of a north window rather than some other facing. Allen Latham, page 53.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Hives in Pairs—Early Queen-Rearing—Moving Bees Several Rods.

1. In setting hives in pairs, two on one stand, with only a small spacing between them, do you turn the entrances in opposite directions? And in your experience do you think it makes much difference whether a hive faces east or west, north or south?

2. I sometimes want to rear a few queens early in the season, before drones are flying in this latitude, and would also like to suppress drones as much as possible, in my own apiary, which is largely hybrid, and have my young queens mated with other drones. Would it pay to get a 2 or 3 frame-nucleus of sealed drone-brood from the South?

3. How long would such drones live and be serviceable?

4. I ought to move a part of my apiary several rods, to give the "gude wife" a little more room for her young chickens. Could I do it in the spring? and how would I best proceed so as to lose as few bees as possible? INDIANA.

ANSWERS.—1. The entrances of a pair of hives on the same stand both face the same way. In an apiary well sheltered from the winds, as where a hedge surrounds it, or where buildings are on the windy sides, it matters little which way the hives face. Where hives stand out in the open in a cold country with strong winds, there will be more suffering if hives face toward prevailing winds, especially with large entrances. In such a place it is well for the hives to have their backs to the wind, with entrances in spring closed all but about a square inch, even though it might not do to have so small an entrance through the winter.

2. I don't believe it would pay. Better give up the idea of rearing queens before the time when drones are plenty. If you want to control the matter of drones, instead of trying to do it early, do it late. You can keep some drones of choice stock in a queenless colony after drones are killed off.

3. I don't know. If I should make a guess, it would be till 6 or 8 weeks old.

4. The day before their first flight would be a good time. It's hard for you to tell just when that will be, and the next best thing will be the next day after. After moving put boards in front of the entrances so as to bother the bees the next time they fly out. It might also be well to fasten the bees in the hives the first day you think it is warm enough to fly, and let them fuss trying to get out for two or three hours before opening the entrances. That will help to make them mark the location. If you pound on the hives after imprisoning them, that will make a shorter imprisonment necessary. But look out for smothering them.

Kind of Hive and Honey to Begin With.

1. Which would you recommend, an 8-frame dovetailed hive, with frames 17⅝x9⅛, and heavy top-bar, or a 10-frame Danzenbaker hive?

2. At this time, which would you recommend to a beginner with bees, producing comb honey, extracted, or bulk comb honey?

NEBRASKA.

ANSWERS.—1. I prefer the dovetailed.

2. That cannot be answered in a word. It depends on the locality, the market, and the man.

To Test Beeswax Adulteration.

How can beeswax be analyzed? How can I tell if there is tallow in it?

ILLINOIS.

ANSWER.—If there is tallow in it, it will have a greasy smell and a greasy feeling. Root's "A B C of Bee-Culture" gives a specific gravity test. Put a piece of beeswax that you *know* to be pure in a jar partly filled with water, and add alcohol till the wax sinks just to the bottom. Then put in your suspected sample, and if it does not sink to the bottom you may pronounce it adulterated.

Foundation Plan of Preventing Swarming.

1. How did the foundation plan described in your book, "Forty Years Among the Bees," work in 1903?

2. Would you advise this plan in the production of comb honey, where a moderate increase is wanted?

IOWA.

ANSWERS.—1. Conditions and trying other things crowded out the foundation plan for preventing swarming, so that it wasn't tried in 1903.

2. Good plan *if* it works perfectly with *you*. So try it on not too large a scale.

Wintering Bees in a Glass Hive—Introducing Queen-Cells.

1. Would bees winter satisfactorily in a 10-frame Langstroth hive, 3 sides of which are glass, providing it was well packed in an outside or winter-case? Or, to be exact, would they winter in an observatory hive on the winter stand, if well protected?

2. Can a brood-frame having a queen-cell be put in a queenless colony and be accepted by a colony the same as if a queen-cell were grafted on one of their own frames?

CONNECTICUT.

ANSWERS.—1. They ought to winter nearly if not as well as in an ordinary hive.

2. Just as well, and in some cases a little better; for when a cell is grafted in the bees sometimes seem to think there's something wrong about it, and tear down the cell.

Moving an Apiary—Stimulating Feeding.

1. Can I move, as shown on the enclosed diagram, the whole distance at one move without losing some bees, by going back to the old stand?

2. I am very much interested in bees, but I am so situated now, that I cannot give them proper attention. I have some in box-hives. Do you think I could get good results by boring holes in the top, and placing supers above?

4. I wish to feed my bees to stimulate breeding. Which is the best to feed, sugar syrup, sugar candy, or molasses candy? Or is there any thing better?

TENNESSEE.

ANSWERS.—1. It is a question of moving bees only a few rods, not so safe a thing as moving a mile, yet if you can move them at a time when they have not had a flight for some days there ought not to be much trouble. When you move them, be sure not to leave any stands, and if you can make some changes in the appearance of the old place it will help, as it will not look so much like home to them. It will also help if, after you have set them in the place, you set up a board before each entrance so as to obstruct the direct flight of the bees.

2. Yes; the first bees I ever had were in half a barrel, and the first honey I got was obtained by boring holes through the top and setting a box over. Allow pretty free passage; 2-inch hole, or several smaller ones.

A Beginner's Question.

I have 3 honey-combs. How will it do to get 3 queen-bees and put them on the combs about the middle of April? I don't think the bees will swarm here till after the first of June.

MISSOURI.

ANSWER.—I see no reason why it should not work all right; indeed I would feel very positive about it were it not for the fact that so many times when I've decided a thing for the bees, they, instead of relying upon my judgment and doing as I said, as intelligent bees should do, have gone right ahead and done just the opposite. So, although I may tell you what the bees *should* do, you'll have to refer the matter to them to find out what they actually will do.

Placing Hives—Wax-Worms and Spiders.

1. How close can hives be placed without interfering with each other?

2. Will the wax-worms trouble combs after they (the combs) have been thoroughly cleaned by the bees?

3. Will the wax-worms trouble foundation after it has been put in the frames and stored away for spring?

4. Will spiders hurt comb foundation, or will they protect them against the destructive wax-worm?

You did not miss it far, when you answered my father's question about dead brood, as we transferred our bees from some old hives into some of our own make, and found a few worms. We make our own dovetailed hives and supers, and can do it at a very little cost.

LOUISIANA.

ANSWERS.—1. If you want to occupy as little ground as possible, put the hives in pairs. The two hives of a pair may sit facing the same way, as close as you can put them without actually touching. Then allow a space of two feet or more in the row between the pairs, and then another row back to back against the hives of the first row. That, as you will see, makes the hive in groups of four. Any additional number of rows may be placed by having an alley way, between, said alley being eight feet or more in width.

2. Yes, indeed.

3. It would not in the North, and probably not with you.

4. They will protect them from the moth, but not from worms if the eggs of the moth are already there.

Chilled Queen—Medium vs. Light Brood Foundation—Brushed Swarms, Etc.

1. Will a queen that was chilled coming through the mails be all right next spring?

2. Does medium brood foundation give enough more wax to the bees to make it pay better than light brood foundation?

3. In making a brushed swarm, how would it do to take away all the brood but one comb of capped brood, filling out the rest with foundation?

4. Will a young queen, reared July 20, be old enough next June to have drones in the hive?

5. What time do you put the super under the brood-chamber in the spring for the queen to lay in? or do you use a double brood-chamber?

6. In your text-book you give a plan of ventilating the upper stories by shoving them forward and back, leaving a space at one end. Does the rain not get in through the space?

MANITOBA, CAN.

ANSWERS.—1. Hardly; but if you want to breed from her you may get good stock, even if she lays so poorly as to be of little value for honey.

2. It will probably be better economy to use the thinner foundation if you can do so without having it sag.

3. It will be all right; indeed I have given several combs of sealed brood satisfactorily, making sure there was no young brood.

4. Yes.

5. As soon as, or a little before, the first story is filled, I put under it a second story of the same kind, reducing to one story of brood when sections are given.

6. I suppose it does, but it never seems to do any harm, being at the end. At any rate, the harm is overbalanced by the good.

Cold Winter—Early Stimulative Feeding.

Up to this date, the winter having been extremely and almost unheard-of-ly cold, my bees, which are on the summer stands in the loft of a barn, have not taken their usual noonday flight in January and February.

By referring to my notes of previous years, I see that the bees in 98 were out for the first time on Feb. 6; in 1899 they were out early in February, and even the 3d of the following December. Last year they flew several noons in January and February. What the spring results will be is hard to say, yet I am not alone. Most of us here in New England are realizing that we are experiencing a most severe winter. I fear a poor showing next spring of the bees wintered on summer stands, as is the prevailing custom here, the thermometer readings having been anywhere from 6 to 30 degrees below zero (W. Johnsbury, Vt.) not only for one day, but for several days at a stretch. I am anxious to know how the bees kept summer and winter in a loft will come out next spring, compared with those kept in hives out-of-doors.

Now, if the thermometer stands low for one or two weeks to come, would you advise any feeding of candy, syrup, or meal, to stimulate brood-rearing? Or would you leave the hives unmolested until real spring days? Could not some feeding be done to advantage some warm noons, which invariably must come sooner or later?

MASSACHUSETTS.

ANSWER.—Unless there is immediate danger of starvation, better not think of feeding till bees fly nearly every day. If you feel a little shaky about this advice, try it on a single colony, and the result will probably be such that you will be thankful you didn't try it on all.

◆

Bees and Fruit-Drying—Uniting for Comb Honey.

1. I have a neighbor that seems concerned lest my bees injure his fruit in drying it. Now anybody with bee-sense at all knows that bees will not, neither can they, carry off any fruit. They will bother some during drying pears—sipping juice—that is all. They do more good in pollenization than they could do harm any other way. What I want to know is this: Could he declare them a nuisance, by law? and could he make me move them, they being here before he bought his present location? Has there been any court decisions on such matters that could help me in case of trouble? I don't anticipate any, but I want to be forearmed. Where can I have access to such without going to the expense of consulting a lawyer?

2. In running for comb honey I understand it is necessary to keep colonies very strong. Now, will it be advisable to double two strong colonies and leave them together all during the honey-flow? or shall I divide again in the fall?

CALIFORNIA.

ANSWERS.—1. Yes, there have been trials and court decisions, and more than one bee-keeper has been helped through by means of the National Bee-Keepers' Association. Your wise plan will be to become a member of that Association before you get into trouble—it will be too late afterward—and that will only cost you a dollar a year, and perhaps heavy lawyers' fees. The General Manager can furnish you valuable literature on the subject. You can become a member by sending your name and one dollar either to the General Manager, N. E. France, Platteville, Wis., or to the Editor of this paper.

2. No, you would probably lose rather than gain by uniting two good colonies before the honey harvest.

◆

New Combs for Extracting—Queen-Excluder—Swarming Management, Etc.

1. Can new combs be used for extracting when built on full sheets of comb foundation and wired?

2. How many Langstroth frames should be given at first to a good, strong colony?

3. Can the queen-excluder be laid down flat on the top-bars and the super placed on top, or should there be a space between the top-bars and the excluder?

4. How about putting the sealed brood above when the bees swarm, and take the unsealed brood away and run the swarm in on starters?

5. How long since man first discovered that bees gather and store honey?

6. How long have bees been kept in boxes or hives of any kind?

7. Why not throw away that tool-basket, and put them in the hive-seat you are packing around there. ("Forty Years Among the Bees," pages 63 and 75.)

WEST VIRGINIA.

ANSWERS.—1. Yes, but while they are new and tender it is well to use caution in extracting if they are very full. Turn not too rapidly, and extract perhaps half the honey on one side. Reverse the comb and extract all of the other side. Then reverse again and finish up the first side.

2. All that the extracting super will hold.

3. If you use a plain sheet of perforated zinc, lay it flat on the top-bars; if you use a wood-zinc, slat honey-board, there should be a space below and above the excluder.

4. It will likely work all right, but sometimes they will swarm out again. It will work better just before swarming.

5. I can't tell to a day, but it was more than 3500 years ago.

6. That's harder yet; I give it up.

7. The tool-basket is light and handy to take to different apiaries, and each apiary has its own quota of seats. But I am rather changeable, and there's no certainty what I may be using next year. As I grow older I may become less changeable.

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FROM MANY FIELDS

Bees All in Good Shape.

I have 5 colonies of bees, all in good shape at the present time. I am fond of reading the Bee Journal; I would not give it up for all the other papers that come to my address.

W. H. HOBERT.

Muscatine Co., Iowa, Feb. 21.

Bears and Bees.

Several months ago a correspondent stated that he wished to start an apiary in a region infested with bears, and asked for advice along the line of preventing their ravages in the proposed apiary. I have waited for some one to help him, through these columns, but no one having done so I will try my hand. I suppose he has long ere this established his apiary, yet the advice may be acceptable.

I will admit, right on the start, that while I have had for many years experience with bees, and have hunted and trapped bears, still I never was troubled with bears in the apiary, so perhaps I cannot give as good advice as some man having an apiary in a remote mountain district.

I think an ounce of prevention is usually worth a pound of cure, therefore I would try to exclude the animals from the yard, and believe that if the ground was of such a nature as to admit the setting of posts, that a strong and high barbed or woven wire fence would fill the bill; perhaps the Page Fence could furnish something that would answer.

If this plan is not feasible here is another: Bears are very fond of any kind of sweets, hence their desire to rob the hives. Take any receptacle—a small syrup-keg sawed in twain, making two small tubs; put a few quarts of syrup into these tubs, and mix a small amount of strychnine (about a teaspoonful to four

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gallons); the poison should be dissolved in a little water, and then thoroughly stirred into the syrup. Place these tubs in or near the haunts of the animals, and you will soon be rid of them. Small troughs chopped out of slabs of wood will do very well in place of the kegs. If you wish to take the animal alive, use a No. 5 Newhouse trap for black or brown bears, and No. 6 for grizzly or silver-tip. These animals will walk into a trap as readily as a hog. Place them in their trails, or bait them with the carcass of some large animal, and set the trap in such a manner that the animal in coming to the bait will pass over the trap. Do not fasten the trap, but secure the chain to a small log termed a clog, so the animal can drag it around. Bears can then be shot at short range with a rifle or heavily charged shot-gun. J. A. NASH.

Spokane Co., Wash., Jan. 22.

May Be Heavy Winter Losses.

This is a hard winter for bees that are being wintered out-of-doors here in the northeastern part of Wisconsin. They have had no flight since the first part of November. I fear for them if the weather does not change soon so they can have a flight. There may be some heavy losses to report this spring.

C. H. VOIGT.

Manitowoc Co., Wis., Feb. 25.

A Report—Selling Chunk Honey.

I have wintered my bees on the summer stands, and last spring came through with about 50 colonies, most of them weak, and some very weak. They got but little from early bloom, such as soft maple, willow, etc., and but little more from fruit-bloom, so my only chance was feeding, which I did, and by judicious management otherwise I had them in fair shape when white clover came into bloom; but they stored no honey, and barely got enough to live on and keep up brood-rearing until at least two weeks of clover bloom were gone. Prospects really got a little blue, but suddenly the tide changed and they began to store in the sections, and stored very fast during the remainder of clover bloom, which ended the honey harvest, as they got nothing from basswood, and the fall flow was merely sufficient to keep up brood-rearing and strengthen their stores for winter.

I got 2300 pounds of honey, and increased to 67 to 68 colonies. I could have increased much more, but did not wish to do so. While they were inclined to swarm a good deal, they were not so crazy and demoralized as in the two previous seasons.

I sold my honey in the home market at an average of over 14 cents per pound. Including what we used, I supplied 6 groceries in the city of Huntington, and many families. While much honey was sold in Huntington for 12 cents per pound, I had no trouble in selling mine at 15 cents. The secret of it is, I sold nothing excepting first-class honey, put up in first-class shape; the appearance of it sold it without any palaver. It is astonishing to see in what shape some people market their honey—the comb often as white as snow, and the honey first-class in quality, but stored in sections that had done duty for several years—soiled, and covered with propolis until an expert could scarcely tell whether they were made of wood or some other material; and then used without separators, so the comb is buldged into all kinds of shapes. No wonder dealers want to cut down the price on such stuff. It would he a blessing if such bee-keepers could or would realize the injury they are doing the industry by such slovenly, slip-shod methods. Let me give just one instance that I saw:

A grocer showed me honey, white as snow, that he bought; the man who sold it brought in a 28-section super just as it was taken off of the hive, not taken apart, and all covered with propolis, and no separators used. You know how it looked. The grocer agreed to buy it and pay 10 cents per pound for what he could use. In tearing it apart he found 13 sections that contained brood, the other 15 had beautiful honey in them, only a little buldged, and would readily have sold for 15 or 16 cents per pound, if put in proper shape.

I was much interested in Mr. Hyde's paper

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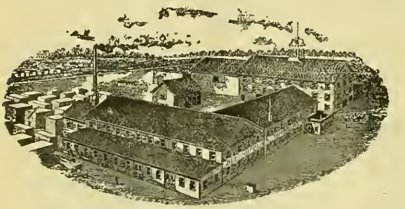

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on chunk honey, read before the National Convention. I commenced a few years ago to sell chunk honey on a small scale, and without much effort have built up quite a little trade in the business. At first I used only broken or bruised sections, or sections that were only $\frac{5}{8}$ or $\frac{3}{4}$ sealed, but lately I have used quite a number of shallow frames. I cut the comb out and place it neatly in a $\frac{1}{2}$-gallon covered tin pail, filling the pail even full, and then run in enough extracted honey to make 5 pounds, which usually fills the pails. I sell this at 14 cents per pound, adding the price of the pail, and pay back the price of the pail if returned in good condition.

Some furnish their own vessels, and take sometimes a 2 or 3 gallon jar full. I consider this a drawing card; while it lasts, it outsells section honey. People have got to calling it "bucket honey," and many of the first families of Huntington and Warren buy it. Some buy it largely for their own use, and then buy a small quantity of section honey for use when they have company. I can make more money producing and selling this at 14 cents a pound than section honey at 16 cents. The only draw back is pollen in the shallow frames; sometimes half the frames in a super have pollen in them. Can any one give a remedy for this? This trade has worked itself up without any special effort to push it, and I will try to cater more to it the coming season than ever.

I have my bees packed on the summer stands. I can't tell now how they will come through, but I fear the loss will be heavy. They have had no general flight since early in November, and there is little prospect of their having any soon; and if this zero weather continues much longer many colonies will die.

A. H. Snowberger.

Huntington Co., Ind., Feb. 4.

Cockleburr.

On page 106, there is a question in regard to "Cockleberry," and Dr. Miller's answer to the same. There is no such thing as "Cockleberry." It is "cockleburr"—a weed I feel sure Dr. Miller is perfectly familiar with. I kept bees in Louisiana some years ago, and got a little honey from it, but not often. I feel sure that the main part of the honey came from something else.

E. T. Flanagan.

St. Clair Co., Ill.

Jouncing Bees—Combs Buckling.

Mr. Editor:—I notice that you have thrown overboard the egg-hatching-on-a-colony-of-bees humbug. I think it a great privilege, and certainly very instructive, that you give space for our experiences, but it is too bad that sometimes we have bee-stories as well as fish and snake stories. I tried another scheme, in the shape of jouncing bees out of a super. Well, I made such a jouncer, according to discription, and began jouncing. I guess my bees did not understand what I wanted, so they got mad, when I concluded to let them have the jouncer and I made a bee-line for the house, which I reached minus a pair of spectacles.

The next colony I wanted to jounce I smoked before I began jouncing. I jounced until I jounced comb and frames to pieces, and the more I jounced the more the bees seemed determined to take possession of the leaking honey. I thought perhaps my failure depended on *locality*, but I took my jouncer and jounced it against the wall, for it reminded me of some 40 years ago when I learned the cabinet-making trade, and some one, on April Fool Day, sent to me for a "square" auger-bit!

I think if we sent our failures to the papers they would often be as instructive as our successes. For my part I am never ashamed to confess my blunders; and how I do admire Dr. Miller, when he says, "I don't know;" for then my confidence is doubly strong in him when he says he does know.

Some three years ago there was a controversy between an African bee-keeper and Mr. Dadant, regarding the use of comb foundation, and the African claimed it was the ones interested in its manufacture or sale that advocated its use most. I had at that time, as I have now, the highest esteem for Mr.

Dadant, but in this case I thought our Africander might be to a certain extent correct, and I gave, that year, only narrow starters. Now I have the experience and about 500 poor combs. They are irregularly built, many of them at best are fastened only ⅔ of the way down the side-bars; they flab and break in the extractor. Some have the midrib not in the center of the frame, and others have more drone than worker cells. Take it altogether, not one quarter of them are fit for use in the brood-chamber.

In "Editoral Comments," page 51, mention is made of a Mr. M. W. Shepherd as being perhaps the first one to give the philosophy of the buckling of combs. This statement breaks my silence, and as this troublesome buckling is an entirely mechanical fault, I have given it considerable study, as a mechanic, not as a bee-keeper. I have as badly buckled combs as any one can show, and I have others that are as nice and level as if they had been leveled with a smoothing-plane. I am not going to blame the foundation or frame material for those poor combs, for we know it of old that poor mechanics always fight with their tools. As my good and poor combs were made of the same lot of material, only at different times, the fault must be with me (and I found it was).

Mr. Shepherd claims that when the side-bars are but ¼-inch thick, the wires tight, and the comb becomes loaded, the side-bars will spring, the wire slackens, and the comb buckles. With due respect to Mr. Shepherd, I will leave it to the house to decide whether his explanation sounds reasonable. I would judge that when the side-bars spring, and the wire slacken, the combs will sag, but not buckle.

If you expose comb honey in sections to frost, they will crack, and if you tap with your finger on a frame with an empty, frozen comb it may break. This and a hundred other things prove that wax contracts in cold and expands in warmth. If you make frames in winter, and imbed the wire in the foundation, you do this at a time when the wax is contracted. When you give these frames to the bees in summer, and the wax becomes warm in the hive it commences to swell, but as it is crowded between tight wires it will bulge or buckle at once, and I had frames that were buckled when I gave them to the bees. When a tailor makes a suit of clothes he expects a certain amount of shrink in his cloth, which he takes out before he cuts it. When I give comb foundation to the bees I know there is, or will be, a certain amount of stretch in the wax, which I want out first, and the way I proceed is as follows:

I make the frames in winter. I wire them and fasten the foundation to the top-bar, but I do not imbed it. The next summer when I am about to use them I placed them in a real warm place, and when I want them I take some, imbed them, and give them to the bees at once.

I think this ought to solve the question of buckling combs; but still I would like to hear from others. L. H. Cremers.

Jo Daviess Co., Ill., Feb. 1.

Drone's Influence on the Workers.

In a late editorial, it is asked if we have any proof that the drone (or rather the drone stock) has more influence on the worker-bees than the queen.

As a matter of fact, we should expect this to be the case. Among the higher animals, the concourse of both sexes is needed for the production of the offspring, and therefore we may suppose that the offspring takes its characteristics equally from both.

With the bees it is different. The drone has no father; he is born from an unfecundated egg. But let the egg be fecundated and it will produce a female, and nothing but a female—queen or worker. Such being the case, we can expect that the characteristics of the worker come chiefly from the drone.

As to positive proof, we all know that workers from a mismated Italian are more like the black bees than the Italians, at least as far as temper and disposition to run off the combs are concerned.

Mr. Doolittle says that when he first intro-

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Kansas—There will be a meeting of the Arkansas Valley Bee-Keepers' Association, at Hutchinson, Kans., Mar. 5, at 10 a.m. All bee-keepers and others interested are respectfully invited to be present. FRED WILBER, Sec.

Utah.—The spring convention of the Utah Bee-Keepers' Association will be held April 5, at 10 a.m. and 4:30 p.m. Among other important questions to be considered will be the World's Fair, our State Fair, and the Portland Fair of 1905. We also desire to formulate some plan, if possible, to further increase the fraternal interest for the mutual benefit of our bee-keepers. We cordially invite all bee-keepers to be present. We also invite them without delay to send in their views on these and other topics. The convention will be held in the City and County building, in Salt Lake City.

Salt Lake City, Utah. E. S. LOVESY, Pres.

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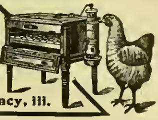

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duced Italian queens in his apiaries, there were none but pure black bees in his neighborhood. The workers from the first mismated queens were necessarily a first cross between Italians and blacks. He says that in nine cases out of ten, the hybrid workers exhibited the characteristics of drone stock. The workers from Italian queens and black drones would show the temper and the disposition to run from the combs, and the habit of capping the honey white, which belongs to the black bees. On the other hand, the hybrids from black queens mated to Italian drones would have all the traits peculiar to the Italian bees. He does not say anything about the color. (See Bee-Keeper's Review, Jan., 1902, page 20.) ADRIAN GETAZ.

Knox Co., Tenn., Feb. 4.

A Good Average Locality.

I have 12 colonies of bees which I think are in good shape. It is warm to-day, and they are having a warm flight for the first time in 2 weeks. The bees did fairly well last season, but swarmed too much to get much honey—about 50 pounds per colony. From what information I get through the "Old Reliable," this section is on an average with other sections. I can say this much for our section, we seldom ever have to feed any. The average is about 50 pounds per colony, spring count. J. R. ENSLEY.

Jackson Co., N. C., Feb. 9.

An Appreciative Apiarian Reader.

Allow me to say, as one barely initiated into the deeply interesting science and art of bee-keeping, that the American Bee Journal is a superb aid to the novice. It is cheap, indeed, at the price of $1.00.

It is so consoling for the troubled apiarist to be able to get solace, comfort and light from the kindly Dr. Miller—himself an encyclopedia of bee-knowledge.

If I am ever tempted to write an article for the American Bee Journal, it shall certainly be on the theme of the mistakes I have made in my youthful bee-keeping. Now, that I have been perusing the Journal and referring to the standard books on the subject, I regret to say I lost many a dollar last summer by not doing what I ought to have done, and by

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I want to tell how much my eyes have improved with one month's treatment. I have commenced the second month's treatment. If they improve as fast with the second as the first I don't believe I will need any more. I was blind in my right eye. It was cataract, and they said I had a serious case, but faithful use of their treatment would make a complete cure. Now it is giving way around the outside, and getting thinner all the time. I can see the motion of my hand in front—almost see the shape of my hand—and to hold my hand to the side of my face and look straight forward I can see my hand plainly, and can almost see the lamp. I can see the blaze, to hold my head up and look at the lamp, or hold it down and look over the top. So you see there is quite difference in not being able to see the least ray of light. I had to wear two pairs of glasses to read or write; now I can see best with one pair.

The treatment I am using is that of the Chilian Remedy Co., of Bushnell, Ill. Their advertisement is in last week's Bee Journal, and has been before. Now don't any sister, or any one else, go to a hospital until they have tried these remedies. I am at home and attend to my work without any inconvenience. I know this is not about bees, but our editor is so good I think he will be willing to give it a place in his paper for the good of others. If it had not been for the Bee Journal I would still be blind, and its value to me is more than I can tell you, as therein I found the advertisement, and knew it was right or it would not have been in the Bee Journal. MRS. SARAH J. GRIFFITH.

Cumberland Co., N. J., Feb. 15.

doing what I ought not to do. To illustrate: I left the supers on a few weeks longer after the honey-flow ceased, and I became thereby the proprietor of a choice selection of unfinished sections. I know of some neighboring bee-keepers who get little or no return from their bees because unappreciative of scientific progress; they are still and stationary, whilst the scientific bee-world moves along. They do not read the bee-papers, and therefore they keep bees as their great-grandfathers did.

Apiarian knowledge should form one of the topics on the program of Farmers' Institutes. Thus it must be popularized. People do not yet realize what an adjunct to the revenues of the farm scientific bee-keeping is; hence it should find a place alongside the other minor agricultural sources of revenue. Above all, it should be insisted on as indispensable that the reading of an up-to-date bee-paper, containing practical, pithy, approved apiarian methods of precedure, should be a prime necessity to success. E. D. RUSSELL, M. D.

Webster Co., Iowa, Feb. 3.

A Steady Cold Winter.

I now have about 75 colonies of bees. We had the poorest season last year we have had since I have been in this business. My wife takes most of the care of the bees now, and she is quite an expert in the bee-line.

We have had the coldest winter known; to-night the thermometer registers 10 degrees below zero; 4 inches of snow, and the wind blowing a March gale. We are about 12 miles from the coast, and the dampness from the Sound or sea water makes the air seem colder than it does farther up the State, with the thermometer down to 40 degrees below zero.

I hope the bees will pull through; they are all packed in chaff hives and heavy cushions, but it has been such a steady cold that they could not move much. THAD H. KEELER.

Westchester Co., N. Y., Feb. 16.

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Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Four percent off for cash orders in December. **M. H. HUNT & SON,**
BELL BRANCH, WAYNE CO., MICH.
Please mention Bee Journal when writing

HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, Feb. 8.—The demand is better for all grades of honey than at any time since the beginning of December of last year. Stocks are now being reduced, but at the same time prices are easy. Many have had it so long that they are anxious to make sales. No. 1 to fancy white comb honey sells at 12@13c; amber grades, 10@11c; dark, etc., 9@10c. Extracted, white, 6@7c, according to quality, kind and flavor; amber, 5@6c. Beeswax, 30c.
R. A. BURNETT & CO.

CINCINNATI, Feb. 8.—There is a fair demand for honey, but nearing the end of the season for comb honey, with large supply, has pressed the prices; fancy white, 13@14c; amber, in barrels, 5¼@5¾c; in cans, ½c more; alfalfa, water-white, 6@6½c; fancy white clover, 7½@8c. Beeswax, 30c. C. H. W. WEBER.

PHILADELPHIA, Feb. 8.—There has been a decided decline in comb honey since last quotations. Bee men who have little lots held back and are afraid they can't dispose of it before warm weather, are shipping it in, selling at any price they can get, breaking the market decidedly. We would quote fancy white at 14@15c; No. 1, at 12@13c; amber. 10c. Extracted, white, 6@7c; amber, 5@6c. Beeswax, 31c. We are producers of honey and do not handle on commission. WM. A. SELSER.

CINCINNATI, Mar. 4.—The demand for honey is brighter than it has been in the past 60 days. We continue to offer amber extracted in barrels at 5½@6½c, according to quality. White clover extracted is a drag on the market at 6½@8½c in barrels and cans. Comb honey seems to be reviving at 13½@15c for fancy.
Beeswax, 30c. THE FRED W. MUTH CO.

ALBANY, N. Y., Feb. 1.—Honey demand very light. Prices of comb honey are largely now what the buyers will offer—from 10@15c. We look for better demand when weather is warmer. Extracted doing some better at 7c for white, 6½c for mixed, and 5½@6c for dark and buckwheat. Beeswax, 28@30c.
H. R. WRIGHT.

BOSTON, Feb. 9.—There is little change to note in the honey market. Strictly fancy Eastern honey is scarce. Western honey will not bring as much here. We quote fancy white in glass-front cases at 16c; No. 1, at 15c. Supply is ample, and demand light at this time. Extracted, water-white, 8c; light amber, 7@8c; with but little call for dark Florida.
BLAKE, SCOTT & LEE.

KANSAS CITY, Feb. 24.—There is no change in the price of comb honey; the supply is large. The receipts of extracted are large and the demand very light. The market price is: Fancy No. 1, comb, 24 section cases, $2.25; No. 2 stock, $2.00. Extracted, white, per pound, 6@6½c; amber, 5½@6c. Beeswax, 30c.
C. C. CLEMONS & CO.

NEW YORK, Feb. 27—Demand for comb honey has slackened off considerably, and while there is some call for white, receipts are heavier than the demand and in quantity lots, quotation prices are shaded more or less. We quote fancy white at 13@14c; No. 1, at 12c; amber, at 11c. There is no more demand for dark honey whatsoever, and we would not encourage shipment of this grade. Extracted honey is quiet at unchanged prices. Beeswax in good demand at from 28@30c. HILDRETH & SEGELKEN.

SAN FRANCISCO, Feb. 17.—Extracted, white, 5½@6c; light amber, 4½@5c; amber, 4@4½c; dark amber, 3½@4c. White comb, 12½@13c; amber, 9@11c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

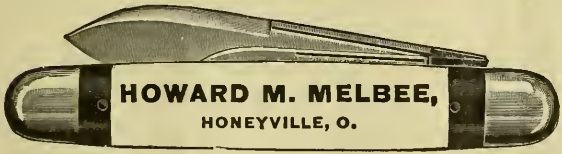
The steamer Newport, sailing on Saturday, the 6th, took 115 cases extracted honey for New York. Local demand is light. Extracted is not in heavy spot supply. The prospects of an early cleaning up of comb honey are not at the moment particularly encouraging.

HONEY AND BEESWAX
When consigning, buying or selling, consult
R. A. BURNETT & CO.,
199 SOUTH WATER ST. CHICAGO, ILL.
Please mention Bee Journal when writing.

Wanted to Buy! 100 colonies, or less, of BEES for **SPOT CASH**, in or near Northampton Co., Pa. State kind of hives used and price wanted. Crystal Poultry Yards,
88 So. Franklin St., WILKESBARRE, PA.
8A4t Please mention the Bee Journal.

The Novelty Pocket-Knife.

Your Name and Address on one side—Three Bees on the other side.



(THIS CUT IS THE FULL SIZE OF THE KNIFE.)

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last-time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00.) We will club the Novelty Knife and the Bee Journal for one year, both for $2.00.

GEORGE W. YORK & CO. Chicago. Ill

☞Please allow about two weeks for your knife order to be filled.

Please Mention the Bee Journal when writing Advertisers *****

The Best Bee-Goods in the World....

are no better than those we make, and the chances are that they are not so good. If you buy of us **you will not be disappointed. We are undersold by no one.** Send for new catalog and price-list and free copy of THE AMERICAN BEE-KEEPER; in its thirteenth year; 50 cents a year; especially for beginners.

——THE——

W. T. Falconer Mfg. Co.,
JAMESTOWN, N. Y.

W. M. Gerrish, Epping, N.H., carries a full line of our goods at catalog prices. Order of him and save the freight.

Please mention Bee Journal when writing.

ST. LOUIS, 1904.

Bee-Keepers' Supplies Galore.

Catalog Free.
A No. 1 Smoker by mail, $1.

Bees, Honey and Beeswax bought and sold for cash.

LEAHY MFG. CO.,
1 Alta Sita, East St. Louis, Ill.

I. J. STRINGHAM, 105 Park Place,
NEW YORK

Manufactures and carries in stock every article a bee-keeper uses. BEES AND QUEENS IN SEASON.
Apiaries—Glen Cove, L.I. Catalog free.

Bee-Supplies!

G. B. Lewis Co's Goods.

Don't Wait Any Longer to Buy.
Big Discount for Orders Now.

Write us to-day and say what you want, and get our prices. New catalog of 84 pages; it is free.
We also handle the famous
Hoosier Incubators and Brooders.

C. M. Scott & Co.
1004 East Washington Street,
INDIANAPOLIS, IND.

Special Notice to Bee-Keepers

BOSTON

Money in Bees for you.
Catalog price on

ROOT'S SUPPLIES.

Catalog for the asking.

F. H. FARMER,
182 Friend St., Boston, Mass.
Up First Flight.

FENCE! STRONGEST MADE. Bull Strong, Chicken-Tight. Sold to the Farmer at Wholesale Prices. Fully Warranted. Catalog Free.
COILED SPRING FENCE CO.
Box 89 Winchester, Indiana, U. S. A.

39E26t Please mention the Bee Journal

27th Year **Dadant's Foundation** 27th Year

We Guarantee Satisfaction. What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS. PATENT WEED-PROCESS SHEETING.

Why does it sell so well? Because it has always given better satisfaction than any other. Because in 26 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies
OF ALL KINDS.

Langstroth on the Honey-Bee—Revised
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

DADANT & SON, Hamilton, Hancock Co., Ill.

EVERYTHING IN BEE-SUPPLIES

Of course you have our New 1904 Catalog, 68 PAGES

Beginners Should Use Lewis' Appliances.
OLD TIMERS DO.

LEWIS WATERTOWN, WIS. U.S.A.

Our SECTIONS Are Superb,
Our HIVES far better "than Father used to make."

PROMPT SHIPMENTS.

Your Bees Won't Sting You
IF YOU GIVE THEM LEWIS' GOODS.

Separators in Section Honey.
WM. M. WHITNEY.

Extracted vs. Comb Honey for Food.
DR. G. BOHRER.

MASSACHUSETTS AGRICULTURAL COLLEGE

AMERICAN
BEE JOURNAL

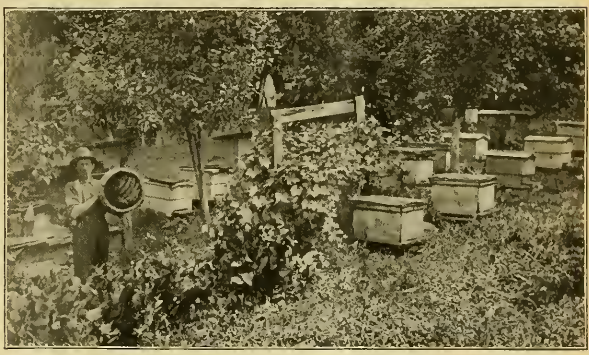
WEEKLY—$1.00 A YEAR.
Published by GEORGE W. YORK & CO., 334 Dearborn Street.

44th Year. CHICAGO, ILL., MARCH 17, 1904. No. 11.

A QUARTET OF SMALL APIARIES.

(See page 196.)

APIARY OF ANDERSON YORK, OF DAVIS CO., IOWA.



APIARY OF EDWIN TRITTENBACH, OF NORTHAMPTON CO., PA.

APIARY OF C. W. CILLEY OF MERRIMAC CO., N. H.

APIARY OF A. H. OPFER, OF COOK CO., ILL.

THE VOICE OF THE PEOPLE

DANZENBAKER'S HIVE.

MORE HONEY. BETTER PRICES.

WE HAVE TOLD YOU SOME THINGS

—ABOUT THE—

DANZENBAKER HIVE

FOR COMB HONEY.

NOW SEE WHAT OTHERS SAY.

MORE HONEY.

UNION BRIDGE, MD. Feb. 9, 1904.

The A. I. Root Co., Medina, O.

Gentlemen:—I saw in a recent issue of your paper that you have a department called "Reports Encouraging." I shall send you my report.

I use the Danzenbaker hive and will give you report of the same, as the few dovetailed hives that I use do not compare at all with the Danzenbaker. One colony gave me over one hundred pounds No. 1 white honey and the rest averaged about sixty, with an increase by natural swarming of one hundred per cent. A friend of mine who uses all sorts and kinds of hives in his apiary succeeded in making scarcely enough honey to pay for the foundation used in the sections. This was about two miles from my apiary. Long live the Danzenbaker hive! It is just the thing for this locality.

Yours truly,
J. B. HOLLOPETER.

MALLET CREEK, O., Sept. 25, 1902.

I have now 250 colonies of bees, of which 170 are in the Danzenbaker hives, and shall have all my bees in Danzenbaker hives next spring. During this past poor season, 30 or 40 of the colonies in the Danzenbaker hives gave over 100 lbs. surplus. On the average I get more than double the amount of honey from these colonies that I do from those in the old chaff hives. With a 7-inch telescopic cover, the Danzenbaker hive winters the bees better than the chaff hives.

VERNON BURT.

MORE HONEY AND BETTER PRICES.

I have used both square and tall sections in all my apiaries five years, and know from practical experience that it will pay to discard the 4¼ sections, and use only 4x5 sections, and the Danzenbaker hive with the fence separator. They have made enough more this season in the same yard to pay for the hives. I have made *more money* this season per hive than I have any previous year in my 15 years of bee-keeping. Fifteen of my strongest Danzenbaker hives made me a ton of honey. When it comes to sales I get more for the 4x5 sections, and have no work in cleaning them. I ship them as I take them from the super. This is not the case with the 4¼ section. I make honey to sell, and anything that sells the best, and for the most money is what I want out of the bee-business.

S. D. MATTHEWS.

In Gleanings, p. 931, Dec. 15, 1899.

MOUNTAIN VIEW, N. J., Oct. 6, 1897.

I have run my hives largely with the Danzenbaker sections this year, and shall increase my facilities for the Danzenbaker output next year. I sold all my fancy clover in Danzenbaker sections, glazed, to two fancy grocers in New York, at 20 cts. a section; were retailed at 25 cts. each. My 4¼ sections, unglazed, sold to grocers at 12½ to 13 cts., retailing 16 cts. I furnished cartons with the 4¼, which cost nearly as much as glass.

B. F ONDERDONK.

BETTER PRICES FOR DANZY. HONEY.

ROCK VALLEY, N. Y., Feb. 22, 1901.

My bees gathered no surplus after July 1. I had only 1200 lbs., but I obtained a fancy price—15½ for "Fancy" and No. 1 white, and 14½ for No. 2 here at my station for all the Danzenbaker 4x5 plain sections, used on your hives, while I got only 14 and 13 cts. per lb. for the 4¼x4¼ square sections, and I consider that much difference is worth looking after—don't you? The Danzenbaker hives doubled up, two brood-chambers, are in fine condition, even better than my double-walled hives. I intend to build a bee-cellar and work off my double-walled hives as fast as I can, and get the Danzenbaker hives.

Very truly yours,
J. L. HAIGHT.

It is not claimed that so large an advance in price as is mentioned above can usually be obtained for honey in Danzenbaker sections, but because it is more uniformly fancy grade, and of general better appearance it commands the highest prices and a more ready sale in a dull market than ordinary honey.

A RECENT ORDER.

INDIANAPOLIS, IND., Feb. 3, 1904.

The A. I. Root Co., Medina, O.

Dear Sirs:- Please ship to me as soon as convenient: 500 Danzy. AD64M hives.

Yours,
WALTER S. POUDER.

(This is in addition to all other orders.)

64-PAGE BOOK.

Mr. Danzenbaker's little book, "Facts About Bees," containing 70 pages, giving full particulars regarding this hive and system, is indeed full of facts. If one follows the directions clear through, he is sure to produce a strictly first-class article of comb honey, providing of course there is any honey to be had. This unique little book will be sent free to all who apply for it.

Bee-keepers are raising honey for the money there is in it, or for the pleasure they get out of it. It is conceded by all who have tried this system that it is highly profitable. Reading over letters from the users of this hive who tell of securing large crops of honey almost free from propolis makes us think that the bee-keeper who is in the business for pleasure would be highly gratified with the hive also. What is more satisfying than to take off well-filled supers of snow-white sections free from the propolis that is so often found on sections in cases that are poorly constructed and adapted for the production of a fancy article?

SPECIAL NOTICE.

The great popularity of the Danzenbaker hive has brought the shallow brood-frame and the tall plain sections into prominence. It must be remembered that no other hive contains the essential features of the Danzenbaker. The success of this system depends on having everything just right, so you should place your order for the Danzenbaker hive with our main office, or any of our branches or regular agents.

THE A. I. ROOT COMPANY,

Main Office and Works, Medina, Ohio, U. S. A.

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BRANCHES:

(See list of Jobbing Agents in American Bee Journal, Jan. 7, page 2.)

AMERICAN
ESTABLISHT IN 1861
THE OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL
Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

GEORGE W. YORK, Editor. CHICAGO, ILL., MARCH 17, 1904. Vol. XLIV—No. 11.

Editorial Comments

The Manufactured-Comb-Honey Yarn.

A week or two ago we received a letter from Mr. Gustave Gross, of Wisconsin, enclosing also a clipping from the Chicago Inter-Ocean, taken from its department of "Questions and Answers." Some one, among other questions, had asked, "Is there any manufactured honey sold in combs?" The answer given by the Inter-Ocean is this: "A good deal of honey is manufactured in combs."

Mr. Gross suggested that we enter a protest to the Inter-Ocean, thinking that it would possibly have more weight than if he himself wrote to them about it. We called three times at the Inter-Ocean office, and finally found the person who was responsible for answering the question. It happened to be a lady. She was very courteous, and said she had received several letters on the subject. Before we stated the object of our call, she said she thought she knew why we had come.

We had a very pleasant interview, and a prompt and full correction was assured. She was under the impression that she had read in some book, or had been told by a prominent person, who she thought was authority, that comb honey is manufactured. We assured her that it was all a mistake, explaining to her the origin of the manufactured-comb-honey lie.

We have not as yet seen the correction, but suppose it has appeared. As the question and answer were in the weekly issue of the Inter-Ocean, likely the correction also appeared in that edition, and not in the daily.

The cordiality with which we were received, and the readiness with which we were assured that the correction would be made, created a very favorable impression upon us. So many papers, after publishing the manufactured-comb-honey story, have been inclined to ignore all requests for correction. But the Inter-Ocean seems to be a delightful exception. We furnished it with printed information on the subject, and suggested that it might be used to good advantage in setting themselves right before their readers.

We are always glad to have our subscribers call our attention to matters of this kind, as we can not possibly read all the newspapers and magazines that are published, and so we would not know that anything detrimental to bee-keeping had been published. We are always glad to do all we can for the benefit or defense of bee-keepers. That is what we and the American Bee Journal are here for.

California Experiment in Honey-Production.

A newspaper clipping reports that Prof. C. W. Woodworth, of the department of agriculture of the University of California, is carrying on an experiment in the production of honey. A glass hive is used. A report of it reads as follows:

"The experiment is being carried on entirely within this transparent hive, the bees being allowed no communication with the outside world except for the purpose of carrying out their dead. Apparently they have no objection to the close scrutiny under which they are living, for they carry on their work just as under ordinary conditions. The important feature of the experiment is the substitution of artificially prepared food in the place of the usual plant products from which honey is made. The object of the test is to ascertain the minimum cost of production, and at the same time to secure as good, if not a superior, quality of honey. The food which is being substituted in the place of the nectar of flowers is beet-sugar. This is moistened to a paste-like consistency, and placed under glass cases within reach of the bees. The whole apparatus is placed upon the scales so that daily records can be made of the amount of material consumed, and of the quantity of honey produced."

It would be presumptuous to say Prof. Woodworth is doing nothing of the kind, and yet one can not always place implicit reliance upon newspaper reports. The affair certainly has a somewhat fishy appearance.

There is "no communication with the ouside world except for the purpose of carrying out their dead." If the bees follow the usual practice of imprisoned bees, a large number will constantly be making earnest effort to get out of that hive, and the professor will have a lively time opening the gate for each bee that comes along with a dead bee, and then quickly shutting it before any other bee slips by. Then what about that bee-undertaker getting back in?

The bees must be carefully trained in some fresh sanitary regulations, else the hive will become a charnel house from the excrement of the bees.

Two objects are in view. One is to find the minimum cost of production. After the experiment is over some of those unenlightened California bee-keepers who have reported a crop of 10 to 50 tons will know to a fraction just what is the very least for which they can produce a pound of sage honey!

The other object is to "secure as good, if not a superior, quality of honey." Instead of having the honey encumbered with any flavor so common as that obtained from the flowers, it will have the rich flavor and aroma of beet-juice! When this is placed upon the market, the honey obtained by the bees skirmishing around among the rocks and canyons hunting up the posies of the sage, or any other old thing, will have to take a back seat, and the owners of those bees will either have to go out of the business or else go to raising beets!

Freight-Rate on Bees.

We have received the following letter on this subject from Rev. R. B. McCain:

MR. GEORGE W. YORK— GRUNDY CO., ILL., Feb. 27, 1904.

Dear Sir:—Find enclosed a letter from the General Freight Agent of the Alton Railroad to the Local Agent of that road in reply to an inquiry made at my request in regard to freight-rates on bees. I send you this because it was stated at the Chicago-Northwestern convention last December, that the local freight-rate applied to bees. Some members were so positive about it that I was somewhat surprised that I had not learned about it. This is a matter of vital interest to all bee-keepers in the West. I, for one, would like to know who is right—the bee-keepers or the freight agent.

Very sincerely yours, R. B. McCAIN.

The railroad letter referred to by Mr. McCain reads as follows:

MR. H. A. ADAMS, Agent— CHICAGO, ILL., Feb. 19, 1904.

Dear Sir:—Referring to yours of the 12th, beg to advise that there is no lower than three times first-class on bees in hives.

Yours truly, F. A. WANN,
General Freight Agent C. & A. R. R.

On receipt of the letters from Mr. McCain, we at once forwarded them to Emerson T. Abbott, who was one of those who referred to this matter in the discussion at the Chicago-Northwestern convention. His reply reads as follows:

MY DEAR MR. YORK:—Yours at hand and contents noted.
In my opinion, the general freight agent of the Alton needs to get

posted, or else his stenographer is "off her base." Bees in less than car-load lots, properly secured, are double first-class, as you will find by consulting the classification of any railroad belonging to the Western Association. You will remember, no doubt, that this matter was discussed the time that you and I appeared before the Classification Committee. The rate of double first-class was made at my suggestion. One of the committee asked me what I thought would be right, and I told him that I thought double first-class would not be any too much. That is the rate given in the classification issued by the Santa Fe Railroad, I am sure, for I had it examined to-day. I think you can safely depend upon this.

Fraternally yours,
EMERSON TAYLOR ABBOTT.

There can be no good reason why bees, properly secured in hives, should not be shipped as local freight, or less than car-lots, and also at a rate no higher than double first-class.

Apicultural Investigations at Washington.

The report of the United States Entomologist for 1903 contains the following item, showing increased attention given to bee-keeping:

> In apiculture it is proposed specially to investigate the subject of artificial pasturage, which hitherto has not received the attention it deserves. A series of experiments will be entered upon to determine what crops may be profitably employed to fill the gaps in the honey-yield, or to create artificial pasturage for apiaries, and an effort will be made in this connection to introduce honey-plants from abroad. It is proposed to import and test various races or species of bees that are now little or not at all known in this country; for example, the race native to the Caucasus, and those found in Dalmatia, Austria, and notably the large bee of the East (Apis dorsata), to be obtained from the Philippine Islands. The breeding of crosses will be continued, and the collection of statistics is proposed. Further, it is especially desired to undertake experimental and remedial work with the diseases of bees; and particularly with an obscure disease which has been playing havoc with certain apiaries in the State of New York.

* * *

Bee-Keepers' Rights to Territory.

There seems to be an increasing desire to "do something" to prevent encroachment upon territory already occupied by bee-keepers. At the Idaho State convention, as reported in the Rocky Mountain Bee Journal, a new constitution was adopted, and the report says:

> "After some debate, the clause prohibiting any one from becoming a member who locates nearer than three miles to a bee-keeper already a member, provided they propose to engage solely in the apicultural business, was retained. We want to keep down the senseless crowding of the bee-range, and this seems the most feasible plan."

Is not the Idaho Association entitled to the credit of being really the first to "do something" more than talk in this matter?

The question may arise, however, whether it might not have been better to have omitted the clause "providing they propose to engage solely in the apicultural business." It is often, if not always, the the case, that there is less to be feared from a specialist than from one who dabbles in the business. How much better off is Smith with ten dabblers located about him, each one of the ten having 20 colonies each, kept merely as a side-show, than to have the same ground occupied by one man with 200 colonies? A man who intends to make bee-keeping his sole business is not so likely to locate on ground already occupied as the one who keeps only a few colonies. Besides, a man who does not "propose to engage solely in the apicultural business," when he first starts in with 50 colonies, very often grows within a few years to have large numbers.

Dr. Miller had something to say on this subject, especially as to its legal aspects, in last week's issue.

Miscellaneous Items

J. M. Hambaugh, of San Diego Co., Calif., wrote us as follows, March 1:

> "We have been having some nice growing showers for the last two weeks, but no soakers; but we read of rains farther north. I hope they may get down here yet."

* * *

The Apiary of A. H. Opfer.—This is shown on the first page. Mr. Opfer says this about it:

> The group in the picture is Mrs. Opfer, our girl, three boys, and myself. All are very much interested in the bees, especially the little ones, for the sake of the honey. They are not afraid of the bees, as you can see by the position they take in the picture.
>
> The hives face the east. I winter the bees outdoors, putting on a super filled with planer shavings, set the hives together in two rows, facing north and south, then put a frame of 12-inch boards around high enough to clear the entrance, leaving a 2-inch space around each hive, and fill up with planer-shavings, then roof the whole lot over with tar-paper to keep them dry.
>
> I believe in spring feeding, and for it I constructed an entrance-feeder 8x7x¼ inch deep to slip under the brood-frames. It remains there as long as I want to feed. With this feeder I can feed 50 colonies in 15 minutes, and never disturb the colony, nor is there any danger of robbing.
>
> I made two section-extractors, one to take two sections, and the other to take four sections; automatic, reversible. I intend to place the latter one on the market. I believe in economy and labor-saving devices to do work easily and nicely.
>
> A. H. OPFER.
>
> Cook Co., Ill.

* * *

Mr. L. A. Hammond, of Washington Co., Md., sends us the following, taken from a local newspaper:

> BIG BEE-TREE.—In cutting down a large white-oak tree on S. H. Higginbotham's lawn, near Shepherdstown, Md., H. A. Lockhart discovered a swarm of bees that had stored a good supply of honey for the winter. The tree yielded 8 cords of marketable wood, besides 75 pounds of choice honey.

* * *

Married, Feb. 8, 1904, in the parlors of the Arcade Hotel, Higginsville, Mo., Justice J. G. Coe officiating, R. B. Leahy, editor and publisher of the Progressive Bee-Keeper, to Miss Emily Braeutigam, formerly of Belleville, Ill. The bride is a young lady of 19, niece of Mr. Leahy's former wife, from whom he was divorced some two weeks previously, after a married life of about 23 years.

* * *

The Apiary of Edwin Trittenbach appears on the first page. He writes about it as follows:

> My apiary consists of 21 colonies, nearly all of them in chaff hives. Some of them are the 8-frame hives with section-holders, which I consider the best for this locality. From some of my colonies I got as many as 24 sections as early as June 19, which I think was good, considering the weather we had all summer. I leave the hives on the summer stands during the winter.
>
> Notice in the picture where I am holding a straw-skep with a swarm hived in it. I bought the skep of my wife's uncle, at public sale some years ago. He says that as near as he knows the skep is 103 years old. I bought it for its rarity.
>
> The most of my bees are hybrids, and some are blacks. If at any time the black colonies have too many drones I cut the drone-comb out and insert a piece of worker-comb in its place, and often set queen-traps at the entrance of hives and trap them, so as to keep them from mating with the young queens.
>
> There are not many bees kept in this locality, and the bee-keepers get very little honey from them. It is all because they don't take time to read some good bee-papers. I have asked them to subscribe for some journal, thinking they might learn some points in bee-keeping, but it is no use talking to them. I suppose it is because they do not take enough interest in the matter. They often ask me how I manage to get so much honey from my bees every year. I answer questions until I get tired. They appreciate it when I show my bee-books, such as "A B C of Bee-Culture," "Bee-Keeper's Guide," "Langstroth on the Honey-Bee," "Bees and Honey," and "Scientific Queen-Rearing."
>
> There is an abundance of sweet clover about two miles from here—about 30 acres of it, with white blossoms. There is also sumac and goldenrod, basswood, poplar, and asters, in my locality.
>
> I can sell my honey right around home, and at the works where I am employed. I get 12½ or 15 cents for a section of honey, and could sell more honey at times if I had it.
>
> I use the 4¼x4¼x1⅞ sections, 3 bee-way, with section-holders and separators.
>
> I tried a plan last season to tempt my bees to do more straight work in comb-building, and without the use of surplus foundation. I have been partially successful with the plan, and in the future I will explain about it.
>
> EDWIN TRITTENBACH.
>
> Northampton Co., Pa.

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we are using it ourselves.

PRICES, prepaid—Sample copy free; 10 for 20 cts.; 25 for 40 cts.; 50 for 70 cts.; 100 for $1.25; 250 for $2.25; 500 for $4.00; 1000 for $7.50. Your business card printed free at the bottom of the front page, on all orders for 100 or more copies. Send all orders to the Bee Journal office.

Convention Proceedings

The Illinois State Bee-Keepers' Convention.

BY JAS. A. STONE, SEC.

SPRINGFIELD, ILL., June 18, 1903.

Due notice having been given, the Illinois State Bee-Keepers' Association met in Room 17 of the State House, at the call of the President, for the purpose of electing a Foul Brood Inspector for the State of Illinois, for the years 1903 and 1904; and to transact such other business as might come before the meeting.

The meeting was called to order, with Pres. Crim in the chair.

Mr. Crim nominated Mr. J. Q. Smith, of Lincoln, to fill the office of Foul Brood Inspector for Illinois for the two years named in the call, viz.: 1903 and 1904. Mr. Crim put the question, which was carried unanimously.

By a vote it was recommended that the Inspector be allowed four dollars ($4.00) per day and his expenses, for time actually and necessarily spent in carrying out the intent of the law.

The Association favored our joining the National Bee-Keepers' Association in a body, if such arrangements could be made.

Adjourned. JAS. A. STONE, *Sec.*

REPORT OF THE ANNUAL STATE CONVENTION.

The 13th annual session of the Illinois State Bee-Keepers' Association met at the State House on Nov. 17, 1903, for a two days' session.

Called to order with Pres. Smith in the chair. The forenoon session was passed in getting acquainted with one another. A motion was carried that the chairman appoint a committee of three on Resolutions, and a recess was taken till 1:30 p.m.

At 1:30 p.m. the meeting was called to order, with Pres. Smith in the chair.

The President named the Committee on Resolutions as follows: Jas. A. Stone, S. N. Black, and E. J. Baxter.

The Secretary made a verbal report of the numerous efforts the Legislative Committee had made in the last decade to secure laws opposed to the adulteration of honey and other foods; against spraying of fruit-trees while in bloom with poisonous liquids; and of the continuous efforts they had made to secure a foul brood law, until they finally succeeded, by their persistent efforts and the valuable assistance of the Chicago-Northwestern, the American Bee Journal, and many of the bee-keepers of the State, in securing the present law that was placed on our statute books by the last legislature.

The Secretary reported in the same manner what had been done by the Premium-List Committee in securing a premium list from the State Board of Agriculture, which has given us a list which we think is second to none in the United States, unless it be those that have it given to their States only. We think ours should be limited to the State only, and it would result in larger and finer exhibits. We are very much indebted to H. J. Cater, Superintendent of the Apiarian Department at the Fair, for the liberality of our premium list, and for the care he has taken to see that we were fairly treated as exhibitors and visitors at the State Fair.

The Secretary also reported that Superintendent of Agriculture for Illinois at the Louisiana Purchase Exposition—Will B. Otwell—was in correspondence with us, and was desirous that our Association make an exhibit at the said World's Fair, similar to the one made by the same at the Columbian World's Fair.

On motion by Mr. Becker, it was ordered that an exhibit be made if the Commission would give the same amount that our State gave the Association for the Columbian Exposition, viz.: ($3500) three thousand five hundred dollars, and that the Executive Committee have charge of the correspondence, and of the whole matter pertaining to the exhibit in case one be made.

The Association voted to complete the arrangement, partially made at the last called meeting, whereby 50 cents from each membership fee be paid for one year's membership in the National Bee-Keepers' Association.

The treasurer's report was read as follows:

PLEASANT PLAINS, ILL., Nov. 16, 1903.

Treasurer's Report of the Illinois State Bee-Keepers' Association, July 13, 1903—

Received of State Treasurer		$1000
Paid on order No. 1, to State Inspector	$ 75 00	
" " 2, " "	31 10	
Total paid	$106 10	
Balance on hand at this date	893 90	$1000

CHAS. BECKER, *Treas.*

QUESTION-BOX—REARING QUEENS.

Mr. Crim—What is the best plan for rearing queens for our own use?

Pres. Smith—Take your best queen away from her hive, then after a number of queen-cells have been sealed, form nuclei and place the combs containing these queen-cells in them.

Mr. Black—The most satisfactory way I have ever tried has been to select the colony, or colonies, from which I wish to rear queens, stimulate early by feeding until the colony is well provided with eggs and brood, then take the queen from the colony, and introduce her into some colony where you wish to requeen. The colony made queenless will form numerous queen-cells, and when the queen-cells are capped take a frame with queen-cell to be substituted for a frame in the colony you wish to requeen. To be sure they may not destroy the queen-cells so substituted, have an empty hive, take out all the frames and place in it, and while so doing catch the queen and pinch off her head. Then shake all the bees onto the ground two or three feet from the old hive and replace the frames, including the one that has the queen-cell, in the old hive, allowing the bees to run into the old hive; close up, and the work is done. In case of more than one queen-cell on the frame, they can be placed in other hives in the same manner, by cutting out and inserting in the frames of the hive. In this way you can treat as many colonies as you have queen-cells. By using drone-traps, drones from objectionable colonies may be caught.

Mr. Smith—My plan is to select the best honey-gatherers, and of the gentlest disposition. Stimulate during fruit-bloom. As soon as the first swarm issues from it, exchange hives with the next strongest one; in this way you add to hive No. 1 all the field-bees from the strong swarm, and in a few days the young queens will issue from hive No. 1 with a prime swarm. As soon as possible change the place of hive No. 1 a second time with another strong colony, and continue this procedure as long as you hear piping, or at least three colonies may be requeened from each select colony with virgin queens from prime colonies.

BEGINNING WORK ON WHITE CLOVER.

Mr. Primm—How early can we expect our bees to begin work on white clover?

Mr. Baxter—Bees seldom store honey from white clover earlier than June 10.

Mr. Becker—I have known of bees storing an abundance of honey from white clover as early as May 20.

INFALLIBLE METHOD OF INTRODUCING QUEENS.

James Poindexter—When we say infallible, we mean that with us it has been an unfailing process, when practiced during the past 12 or 15 years, and shall claim the right to use the above heading, until at least we meet with one failure.

While we have not used the method exclusively, yet it has been a success under very unfavorable conditions, such as when colonies had been queenless for weeks, and in a few instances laying workers were present in the hive when the queen was released, and in times when honey was scarce and robber-bees were plentiful. Also, it has been a success when other methods tried on obstinate colonies failed. We will say, however, that we did not give Dr. Miller's method of introduction by baptism a trial.

The success of the method is based on the principle that animals, as a rule, are less belligerent, and more amiable with a full stomach than otherwise. The genus homo and the honey-bee being no exceptions.

Our way of operation is this: First see that the colony is queenless, and has plenty of honey for the bees to fill themselves with. Then get all the bees possible inside, close the hive bee-tight, with proper ventilation; cause the bees to fill themselves by smoking and jarring the hive. This last I do by putting a thin strip under the bottom-board, so as to balance the hive, and vibrate it back and forth. This is done for 15 minutes or more; if there is no unsealed honey it requires longer.

Now see that the queen and attendants have had a good square meal, and make an opening at the entrance, side or top of hive, and cause the queen and escort to run in, by smoking slightly. Close up the hive and continue the jarring for half an hour longer. This is for the purpose of having queen and bees become thoroughly assimilated in actions and scent.

The hive is now left till dark before opening. They are generally left at least two hours, and sometimes all night before opening. The object of leaving till dark is that the bees may have a time undisturbed to resume a normal condition, and robber-bees take no part whatever in the operation.

Secretary Stone—I have never tried introducing queens in the fall of the year, or when there were robber-bees abroad, but once. I bought two very fine golden Italian queens at the State Fair the first of October, in one-frame observatory hives. I attempted, the first week in October, to introduce them. I selected the two colonies I wished to requeen, opened the hive of one, and began search for the queen. By the time I had removed about three frames, the robber-bees came so thick I was compelled to hustle them back. Having no bee-tent, I carried the hive into the honey-house, and just inside the screen-door. I removed all the frames into a box used for the purpose, and did not find the queen till emptying out the remaining bees. I then caged the golden Italian, and brushed the bees from her frame on the tops of frames in the box. Some of her bees flew to the screen door that was covered with bees from the hive, and the others settled with the bees in the box. I then removed the frames from the box to their hive, brushed back all loose bees from the box, screen doors and windows, and placed the caged queen between the tops of the frames, with the cage entrance closed by honey from the hive; moved the hive to the old stand, and left it closed with wire-screen till after dark.

I went through the same process with the second golden Italian queen, and the only afterthought given them was anxiety to know as to my success. The little slates that lie on top of these two hives are marked thus:

"March 13th [the spring following], an occasional Gold. It. can be seen. May 1st not a black bee left."

(Concluded next week.)

Contributed Articles

Use of Separators in Section Honey.

BY WM. M. WHITNEY.

PAGE 10 contains answers under the department head of "Some Expert Opinion," to the questions, "Would you use separators? If so, what kind? Why?"

While the opinion of a novice in the business may not weigh very much as against that of an expert, yet he may be allowed to express it, as it may be possible that some one may be able to glean something from it that shall inspire a desire for further investigation along the same line.

It is hardly to be expected that apiculture, in all of its ramifications, has attained perfection; yet we are struck with the wonderful advancement made since the days of the bee-gum, straw-skep, and the box-hive—all through the persistent efforts of investigations and inventors in the art of apiculture. Perhaps the most important of these was the invention of the movable-frame hive, which has immortalized the name of Father Langstroth among the bee-keepers of this country, at least; also, the invention of foundation, the modern system of queen-rearing, etc.; and not among the least of these was the creation of the beautiful one-piece section, to contain, as nearly as possible, one-pound of choice table honey, with its face so true that a *straight edge* would touch at every point on its surface.

The time was when honey was obtained wholly from the brood-chamber by "brimstoning" the bees; later, by cutting it out in chunks (which is still practiced in many places); by cutting it from brood-frames it has obtained the name of "chunk honey;" still later, some one conceived the idea of boring holes through the top of the hive and placing boxes over them for the bees to occupy, thus securing a better quality of honey. This was considered a great advancement in apiculture, notwithstanding the combs were built irregularly, as in the brood-chamber. But when the section-case and the beautiful basswood sections, came into use, honey-producers exclaimed, "*Eureka!*"

Yet, on trial, something seemed to be lacking, notwithstanding foundation starters or even full sheets were used. While some were built fairly true and regular, many were buldged on one or both sides, or swung out of line either to the right or left, making it difficult to handle such honey to advantage. Some genius, to control and circumscribe the work of the hive, and overcome this difficulty, conceived the idea of the separator, which, to a degree, seemed to accomplish the desired result. As has been stated, it is hardly probable that perfection has yet been attained; may it not be, then, that in this, as in many other lines of human endeavor, in introducing new methods to overcome obstacles, some underlying principle has been overlooked, which, if understood and applied, would have made the so-called improvement scarcely, if at all, necessary?

During a period of ill-health a few years ago, seeking something light to do, and to think about, I took up apiculture as a pastime. The more it was studied and investigated the more fascinating it became. It became desirable to know the why and wherefores of certain things; hence the apiary became, so to speak, a sort of an experiment station, where many things which have been written, and which appear to have been taken as orthodox, have been tested by actual experiment; and one of these is the use of separators in the production of surplus honey.

I am well aware that a large majority of comb-honey producers believe that the use of separators is an absolutely necessary adjunct in the production of first-class comb honey. Now, that which the majority recommend and practice, it would seem at first blush, must be correct, and the proper thing to do. But when has there ever been an innovation made that did not fly in the face of the majority? Without dilating upon this thought—which might be carried to a limitless extent—let us come directly to the subject of comb-honey production.

Who among experienced bee-keepers has not seen brood-combs of honey as true and straight as a planed board? I've seen hundreds of them. Who ever heard of separators being used in the brood-chamber? Such honey, if it did not drip, cut into squares, would make as fine appearance on the dining table as the most beautiful section honey one ever saw. But, says some one, we are inquiring not about brood-comb, but section honey. That is just what we are coming to. The theory of production of one does not, or should not, differ from the production of the other. There isn't a bee-keeper in the country, whose opinion is worth consulting, who doesn't know how to produce frames of comb honey as true as a planed board, with the use of foundation. With hive leveled, frames of foundation properly spaced, force of bees to occupy every frame, and a good flow of nectar, the bees do the rest. Apply this principle to section-honey production, and the same results follows.

I have used all sorts of separators, including the fence, but only in case of a comparatively weak colony do I use them. The fence gives fairly true sections, but with a sort of "washboard" appearance; the solid separator, a smoother appearance, but often a good deal of brace-comb, which, of course, spoils the section for shipping. And, again, where there is a great amount of propolis they make a dauby, dirty mess. Not once in a thousand times do I find brace-comb where no separators are used.

Some think that first-class section honey can not be produced without the use of the queen-excluding honey-board. I have never used it, and not three sections in a thousand has the queen occupied. I think the reason may be the careful spacing of the thick top-bars of brood-frames. At any rate, I have no use for it for that purpose.

The large majority of my honey is produced without separators, and I'd be willing to compare it with the best of separator honey I ever saw. I have sold it to first-class dealers, at the top market price, which is as good a recommendation as one should desire.

Give me 7-to-the-foot, two bee-way, 4¼x4¼ sections, with full sheets of foundation, the hive level, a full force of good workers, a good flow of nectar—some one else can use the separator.

Walworth Co., Wis.

Extracted vs. Comb Honey for Food.

BY DR. G. BOHRER.

THE human digestive organs can no more act upon honey-comb or beeswax, and prepare it to be taken up by the assimilative organs as food and nourishment for the body, than they can prepare pills of glass or diamonds for the same purpose. Yet tons of beeswax pass through the digestive organs of the human family annually, and not one person in all the world can point to any benefit that has been derived from it as food since honey has been in use among mankind. But, on the contrary, it is, to my certain knowledge, an irritant, and positively harmful when taken with food in some diseased conditions of the stomach.

When I was a practicing physician I had under my care, at different times, several cases of cancer of the stomach, in each of which I advised the internal use of honey. And while extracted honey was fairly borne, that taken with the comb was irritating, and careful observation will prove beyond doubt or question that honey-comb is in some degree or other a source of irritation in all cases of diseased conditions of the digestive organs; and when taken into the stomach that is in perfect health, it imposes an unnecessary amount of labor upon the alimentary canal for its removal.

"But," says one, "it looks so much better in the comb than it does when extracted;" which is no doubt true, when the facts referred to are not known, and when we omit to look at it from a hygienic standpoint. The actual facts in the case is what we should be governed by, and when the mothers of the country once learn that extracted honey is more easily digested by their children when cutting teeth, or during any ailment of their digestive organs. they will call for extracted honey in preference to comb honey all the time, when they have proper assurance that they are not purchasing glucose. What we should do is to educate the mass of our people upon these matters of real importance to them, and see to it that each State has a rigid law passed, imposing a severe penalty on any one convicted of adulterating, selling or offering for sale, any adulterated article under the name of honey. I am aware that parties have stated to the public, through the press, that glucose is better than honey, and that we no longer have use for bees or apairies. But not one of these characters believes a syllable that he utters. If glucose is better than honey, why do they not label it glucose instead of "liebilling" (labeling) it honey as they now do? When these impostors are once cornered, and the people know that glucose dare not be sold under the name of honey, and that extracted honey is more wholesome as food when free from comb or wax, they will buy it in preference to comb honey, and will pay more for it.

That honey is more easily digested by persons who can eat honey at all, I have never heard questioned, especially when eaten in reasonable quantities. Six ounces taken at one meal, and it balanced with other articles of food (as Mr. Hasty in his "Afterthought," as set forth on page 71 seems to have done) might set one's digestive machinery to jumping cogs. Let us read carefully his statements, and then see if the following meal-order can be considered out of due proportion:

Honey, bread, pork, beans, cabbage, potatoes, cheese, apple-pudding—of each 6 ounces; coffee 10 ounces, and 2 ounces of butter, which will not oil the whole ration very abundantly. In all, this will be 60 ounces. Let him eat the entire square meal and take it to bed with him, and report how he rested, what his dreams were, and how many horses he tried to sell to himself. Or, to test the case more fully, let him eat extracted honey one night with the above meal-order, comb honey the next night, and sugar the third night.

Rice Co., Kans.

Do Queens Lay in Queen-Cells?

BY E. F. ATWATER.

I HAVE been reading with much interest the discussion on this subject. On page 109 is a letter from Mr. Delos Wood, in which he suggests that Mr. Chantry may be "mistaken" in thinking that he saw queens lay in queen-cells. Mr. Wood's offer to accept Mr. Chantry's invitation, "provided he shall pay my expenses if he fails to show a queen in the act of laying in a queen-cell," is not, it seems to me, exactly fair, for I suppose those queens which lay in queen-cells for Mr. Chantry are old queens about to be superseded, and every bee-keeper knows that such are not at all times on hand, and of select, gentle stock.

Several years ago (1899) this matter was debated in the Progressive Bee-Keeper, in the number for March, in which Mr. Doolittle says:

"Dr. Gallup and Adam Grimm gave conclusive proof that queens do lay in queen-cells, and had been seen to do so." Also, "G. M. Doolittle's assistant in the apiary saw a queen lay in a queen-cell, while Doolittle held in his hand the frame on which it was being done." And, further: "The eggs in a queen-cell are always fastened to the base of the queen-cell in just the same way the queen deposits all of her eggs in worker or drone cells, sticking one end of the egg to the base of the cell, while eggs removed by bees (which is very rarely done) are found lying on their side near the base of the cells."

"Swarthmore" has asserted, in Gleanings, that his breeding-queens deposit their eggs directly in his compressed queen-cell cups. Mr. Quinby and Mr. L. C. Root assert that the queen deposits the egg in the queen-cell, but without giving the reasons for so believing. Mr. Wood writes of "the Dzierzon theory of the size of the cell controlling the sex of the egg, and that is an accepted fact by our best bee-keepers." This was the theory of the late Mr. Samuel Wagner, instead of Dzierzon, and is spoken of in my "Langstroth Revised" as "overthrown."

But, is it not a fact, Mr. Wood, that queen-cells, just before being supplied with an egg, are always contracted at the mouth to about the size of a worker-cell? I can't refer it to the bees now, but, as I remember it, that is so.

Dzierzon says of a normal queen, "She is able to lay male or female eggs interchangeably, at pleasure."

I have known Mr. Chantry for years, and have almost absolute confidence in his observations. He has bred a remarkably quiet and gentle strain of Italians, as I know from having worked in his South Dakota yards, and have had bees of his stock in my own apiary. This is not intended as a free advertisement, but merely to show that one may, with an exceedingly gentle strain of bees, see things that might not be seen in a lifetime among cross, nervous races.

Ada Co., Idaho, Feb. 11.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

That Car-Load of Girls for Arizona Wives.

That invitaton to send a car-load of girls to Arizona seems to be making trouble for the postmaster of Buckeye, Ariz. In a letter to the Record-Herald, he says "that since then I have recevied letters from girls in different parts of the United States, also from Germany and Austria, asking me to send them the names of some of the bachelors, so they might be able to correspond with them."

He wants it very distinctly understood that that "locality" will be "overstocked" with members of the feminine persuasion, if any number of them should follow up their present seeming inclination to encroach upon territory already occupied. He says further:

"Now, I wish to say that there are only a few bachelors here that would get married," so runs the epistle, "and there are as many old maids, and plenty of girls growing up that are just as good and smart as one could find anywhere. The sexes are about evenly divided."

"Girls," warns the postmaster, "do not come out here thinking you could catch a husband as soon as you set foot on Arizona soil. You may get fooled if you do."

Much ado about nothing, it seems. Often the case.

Bee-Keeping Fine Work for Women.

About a year ago, at this time, I was recovering from an illness of several weeks' duration, was able to sit up supported by pillows, and beginning to take an interest in life again. I asked some one of my family to bring me the Bee Journals that had been accumulating for two months.

On looking them over I was delighted to find a department for the bee-keeping sisters, but wondered that so few were availing themselves of the chance to have a cosy chat in that fascinating corner, over which Miss Wilson presided so graciously. My thought was, "She'll see me there when I get well."

The road back to health was a slow one, and there was so much to attend to. with no one to help me in the apiary. The heavy thaw in March caused great loss, because there was so much water in the bee-yard, and when the bees came out for a flight, a strong south wind blowing at the time, caused them to drop into the water and drown. Straw thrown around would have saved them.

I lost many colonies before I could do anything for them. As soon as possible I began to stimulate brood-rearing, and it was a wonder the way those bees built up, and particularly those which had a strain of the golden Adels in them—what workers they are! Those yellow-banded bees built up strong colonies before my blacks had shaken off the drowsiness of their winter's sleep. When a honey-flow was on, they worked for all there was in it, and I got a good crop of honey in spite of the unpromising beginning.

I notice something about the greenish tint of sweet clover honey. The past season I found in the later gathering quite a lot of sections of greenish honey of the most delicious flavor, and wondered because I did not know of any sweet clover growing in this locality.

One day I took a walk half a mile away, and the mystery was explained. The road-bed up a steep hill, and the banks of red shale on either side, were a mass of sweet clover. A young bee-keeping friend of mine, who died three years ago, had lived near that section, and left this fragrant legacy to the bees he loved so well.

All the work in the apiary is done by myself—hiving swarms, putting together sections, taking off honey, etc. I can tell the sisters that there is no more delightful and healthful work in the world for women than keeping bees, and almost any woman in ordinary health can conduct and manage an apiary. MRS. C. A. BALL.

Oneida Co., N. Y., Feb. 29.

Lady Bee-Keepers and Tobacco-Smoking.

Somnambulist, the delightful dreamer of the Progressive Bee-Keeper, after saying something very complimentary about the Sisters' department, replies to my question whether he ever heard of a lady bee-keeper addicted to the smoking habit, as follows:

> Sorry to disappoint you, Miss Wilson. To tell the truth, I have known two women who were at one and the same time devotees of the filthy weed and bees. Two who have always held a warm place in my heart, having entered therein by way of the sugar-cooky route in the sweet days of my childhood. Even now there are some elderly women who would as lief do without their "eatens" as their pipe. They are true-hearted, generous souls, and harbor not the slightest suspicion that they are not ladies in the highest sense. Pray do not think for a moment that I advocate the habit. The enjoyment to be had by the use of either whiskey or tobacco is to me, as yet, an unsolved mystery, and one which I am not at all anxious to probe.
>
> I admire your "grit" in your assumption of the defensive on this question, as well as the matter of "peddling out" wives. All honor to any and all women who stand by their sex. If they themselves can not afford to do it, who can?
>
> Long live and flourish the department assigned to your jealous care.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

QUEEN-LARVÆ PRODUCING WORKER-BEES.

So Pastor Kline has transferred natural queen-larvæ to worker-cells, and seen them grow to worker-bees. Very good. He calls our attention to the fact that we can't make a regular half-and-half of worker and queen (comparable to the working queens of the wasps), yet we seem to get a few steps in that direction. Sometimes, with the worst reared queens, a worker aspect or some worker marks appear. Never on a queen good pollen-baskets, or a workable worker's tongue. Out of 30 transferred into queen-cells, very young, and then after two days transferred back again, only two were brought to maturity at all. One turned out a plain worker-bee, and the other, though small and weak and poor, was evidently a queen. Curious to see that the one worker was given some food and sealed up immediately (old-woman-in-the-shoe style), the sealing much earlier than in the case of unbemeddled larvæ. Page 54.

HONEY GRANULATION AND RE-GRANULATION.

The Northwestern didn't strike any new bonanza of wisdom on the granulation question. Spanish-needle honey very good to remain liquid, and alfalfa the reverse. Dr. Miller thinks honey that has never granulated at all is in a more advantageous position than honey which has been reliquefied. Shouldn't wonder. But no evidence I have yet in hand makes me feel at all sure of it. Let's don't swallow that without some chewing. In fact, I rather think the other way about a very common sort of honey—late honey that granulates solidly, and at once just as soon as the weather gets cool. 'Spects its general status becomes more hopeful each time it is reliquefied. Page 55.

RELIQUEFYING HONEY IN GLASS JARS.

When it comes to reliquefying, Mr. Abbott contributes very valuable experience. He succeeds in reliquefying jars by dry heat without destroying labels—and it stays liquid much longer than it did the first time. I suppose that wouldn't work with poor honey. With a really fine article that's just what everybody ought to succeed in doing—and Mr. A. should have some honor as a pathfinder. Possibly we will need to have the jars a little larger, allowing somewhat more air-space than has been usual. Page 56.

PREVENTING LEAKAGE IN HONEY-JARS.

Yes, with the Mason jar, either for fruit or honey, when the jar is tipped up a small amount of the contents passes over the edge of the jar proper, and can't get back again. Finale is apt to be that it slowly creeps under the rubber, soils the label, and sticks on somebody's fingers. I suppose that with sufficient care most of the jars could be made so tight that there couldn't be any creepage. But that sufficient care is a big amount, more than usually gets bestowed. The biggest light the Northwestern seemed to discover was in that accurately cut disc of very thick manila paper sprung in before the cover is screwed on. Matter for testimony and experience whether it is a reliable remedy to keep the contents from getting over the edge. Page 60.

PRESSING WAX FROM COMBS.

Work sometimes has gaps in it, and it's nice to utilize these intervals by doing something else. Quite possible, however, for economy to rehash itself right there—waste more time than is saved bobbing back and forth—and do two things poorly instead of one thing well. The discussion between Huber Root and Dr. Miller seemed to show that pressing wax has no worth-utilizing intervals of time, and that the continual pressure that might be carried on by a spring or weighted lever in one's absence is not nearly so valuable as the several diggings over of constant presence and attention. I would add that going off to work elsewhere while wax is boiling on the stove is not the safest thing in the world, either. Page 62.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Giving Supers—Spacing Brood-Frames—Cleaning Pollen Out of Combs—Keeping Honey in Open Barrels.

I know some bee-keepers that do not want to read any bee papers or books, for they know (?) all about it. It is different with me, and the more I read the more stumbling-blocks I find in my way. In the first place I wish to express my gratitude for your book, "Forty Years Among the Bees," and I think that simple idea of that robber-cloth is worth the money I paid for the book. As I have a more extensive experience as a mechanic than in keeping bees, I admire your splints in brood-frames very much, and it is a wonder to me that they are not more in use, but this seems another evidence that we honor no saints, nor build monuments to heroes, while they are living.

The end-bars of my brood-frames were very poorly bored, some of them $\frac{1}{8}$ inch out of the center, and some of the foundation buckled badly, so you see that this rule of $1\frac{3}{8}$ inch from center to center is poorly followed. In my extracting supers I used 9 frames in a 10-frame hive. In the latter part of the season I found in many hives brood and pollen scattered in the upper stories, and wondered what caused it.

1. Did I give supers too late when the queen was crowded for room and went in the supers to breed?

2. Would it be advisable to space the frames in the brood-nest to 9 frames in a 10-frame hive, which would bring them about 1 9-16 inches from center to center?

3. What are the results when frames in brood-nest are spaced too

far apart? Would the bees not make a larger bee-space, and would the hive not be more easily ventilated?

4. I am sure I saw young bees, they look short like freaks. If we space frames a little farther would bees build deeper cells and have their young more developed, or longer, with probably longer tongues?

5. If I use 9 frames in the brood-nest and the same number in supers this would make a vertical bee-space from bottom to cover of hive; would this not be easier to ventilate and reduce swarming?

6. When bees crawl through an excluder I notice that they often lose the pollen they carry. By using an excluder over the brood-nest would this not, besides keeping the queen excluded, have a tendency to have the bees carry less pollen in the upper stories?

7. If I pour water or thin syrup on an empty extracting comb, with pollen in, and place it over an excluder or over a super, will the bees clean it out?

8. Is it not a great mistake to turn a brood-comb around in a hive? If so, why do you put two spacing nails on each side of the frames? If they were all four on one side the frame we could not make that mistake to turn them when replacing them in the hive?

9. I am keeping extracted honey in barrels with one head taken out. These barrels stand in a basement with stone walls and windows to the north and will become damp when spring rains come. I planed the top edges off some so as to make a smooth surface. I then take pieces of muslin with weights like your robber-cloth, coated the same with paraffin and placed them over the top. Will the honey be safe to keep that way? At present it is candied, and the top or scum quite hard and dry, with cracks along the barrel-staves. ILLINOIS.

ANSWERS.—1. The supers should be given before the harvest begins, but even if given very early the queen might go up in the supers, unless excluders were used. Eight frames instead of nine in the upper story would help the matter greatly.

2. No; although you might find but little difference.

3. Yes, it would be easier to keep the hive cool, especially in the early part of season when you want everything as warm as possible; so too wide spacing would do more harm than good.

4. If you crowd a brood-comb sufficiently you will have dwarf workers, but the rule doesn't work the other way. Giving extra room will not increase the size. There will be a larger space between combs, but the cells for brood will be no deeper than usual. The upper parts of combs occupied by honey will have deeper cells with the usual space.

5. Yes, it might a little; but I'll tell you a trick worth two of that, as given in "Forty Years Among the Bees," page 91: Instead of having one story sit square over the other, let it be shoved forward or back so as to leave a ventilating space of half an inch at one end, and do the same thing with the cover. I never had a colony swarm when so arranged, but I never had very many of them, for I work for comb honey, and that needs all closed above.

6. Whatever is lost off in passing the excluder would of course make just that much less pollen in the upper story, but the great gain would come from the fact that the bees would not care to carry up much pollen with no brood above.

7. Yes, but you needn't take that trouble, if your bees work as mine do. Put combs with pollen in the extracting super, and before the season is over they will be clean of pollen. The bees in the super probably lunch on it.

8. No, it is sometimes desirable to turn them end for end, and it is better to have spacers so the frames will fit either way.

9. Your covering will help a great deal, but there is some danger that it will not be a perfect protection when the place becomes damp.

◆

Transferring Bees—Danzenbaker Super.

I have kept bees for about 8 years, and have read the American Bee Journal for about 3 months, and I see that I am not handling my bees the way they should be handled. I never had any winter-killed or starved. The man I bought them of claimed they were Italians. I have wintered them on the summer stands without protection. They are in the garden east of the house, shaded by plum and cherry trees, which bloom profusely every spring, but do not bear any fruit.

Four colonies are in 10-frame hives, and I have never taken any honey from the brood-chamber. The other 6 are in grocery boxes, and I let them have all the honey they stored, and they have plenty of stores now. They had a flight on Feb. 5 and 6. I would like to transfer them to new 10-frame hives with Hoffman frames, in order to have them in the best condition for the honey crop of 1904. There is considerable basswood in this locality.

1. What is the best way, and when is the best time, to transfer these bees in order to have them in the best condition for 1904?

2. How do you transfer bees from a cracker-box to a 10-frame hive?

3. Is there any difference in the size of the Hoffman and Langstroth frames? If so, what is the outside dimensions of each?

4. Would you advise the use of the Danzenbaker super on a hive taking 10 Hoffman frames?

5. What are the exact dimensions of a 10-frame Danzenbaker super?

6. Has the 10-frame Danzenbaker hive any advantages over the 8-frame dovetailed hive for comb honey? IOWA.

ANSWERS.—1. Nowadays the tendency seems to be to wait till the bees swarm. Put the swarm in the new hive on the old stand, and set the old hive close beside it. A week later set the old hive on top of the new one. That will send the field-force into the new hive. Two weeks later still (three weeks after swarming) when all the worker-brood has hatched out, drum out all the bees from the old hive and let them run into the new one; then melt up the old combs. That plan will give you a chance for a big yield of white-clover honey if the season is good.

If you want to have a new colony from the old one, proceed as before at hiving, and at the end of a week set the old hive on the new stand, and two weeks later transfer into the frame hive according to instructions in your bee-book.

2. Just the same as your book tells you to transfer from a box-hive.

3. Both the same size—$17\frac{5}{8}$x$9\frac{1}{8}$.

4. You can so use it if you think that is the best super for you; but be sure of that first.

5. Inside measurements: Length, $18\frac{1}{4}$ inches; width, $14\frac{1}{2}$; depth, $5\frac{5}{8}$.

6. My own preference is decidedly for dovetailed, although there are some who are of the opposite opinion.

◆

Feeding Bees Outdoors in Winter.

I had 13 strong colonies last fall, in 8-frame dovetailed hives, on the summer stands. They were, I thought, fairly well supplied with stores for winter. They all have on Hill's device, which attracts the cluster above the frames and causes greater disturbance on removing the cloth than though the bees were all below on the frames.

Two extra-strong colonies have starved, almost no honey being left in the hives, and the others must be short of stores. I have over 100 sections ($4\frac{1}{4}$x$4\frac{1}{4}$x$1\frac{7}{8}$) and 25 frames of sealed honey to give them. What is the best way to do it? To lay sections (4 or 6) sidewise on top of the frames, under the Hill's device? To fill a super with sections, and put on top of the hive, with a cloth and cushion above it in another super? To put the supers under the hive? Or to give the frames of honey? If this last way, how can I get the bees, which stick to the frames, back into the hive?

Would it be best to give them food now, regardless of cold weather?

Would it do harm to use smoke, if necessary?

The hives are all on the summer stands, and the bees have occasional flights. I have no outside protection to hives, as I found on using protection for three consecutive years, those colonies came out strongest and best in the spring which were not protected.

In preparing them for winter, I put on an empty super, then a piece of bagging over the Hill's device on the frames; then a bag filled with ground-cork, and then covered the bag with loose ground-cork, filling all interstices.

On Feb. 15 I opened a hive and put 4 sections of sealed honey flat under a Hill's device—but it disturbed the bees very much, and they were still running about the entrance two hours later, although the thermometer stood at 20 degrees F. They have been flying out with the thermometer at 30 degrees (in the shade). The hives stand in the open, in a warm, protected place. Dense evergreen trees protect them on the north and west, an apple orchard on the east, and a building and evergreens on the south.

I have never lost but 3 colonies from cold; 2 of these in the protected hives. I keep my numbers down by uniting. NEW YORK.

ANSWER.—Answering your questions somewhat in reverse order, it will be better to wait for a day when the bees can fly, unless you think they might starve before that. If there is danger of starvation, they must be fed at all hazards, and you need not hesitate to use smoke if necessary. Better use the frames of honey than the sections. If weather is so the bees can fly, take out one or two of the outside frames, brushing back any bees that may be on them, and put one or two frames of honey right in the middle of the cluster. If you think the need is so urgent that you cannot wait for a warm day, you will proceed much in the same way, only you must proceed with more caution so as not to excite the bees to fly out and be chilled. Carefully remove the Hill's device, brushing back the bees, using smoke if they attempt to fly. Remove one or two of the outside combs, which you will pretty surely find empty of bees, but if any should be on the combs brush them back on the cluster. Then move the frames if necessary till you come to the cluster of bees, and put the honey directly against the cluster, closing all carefully again.

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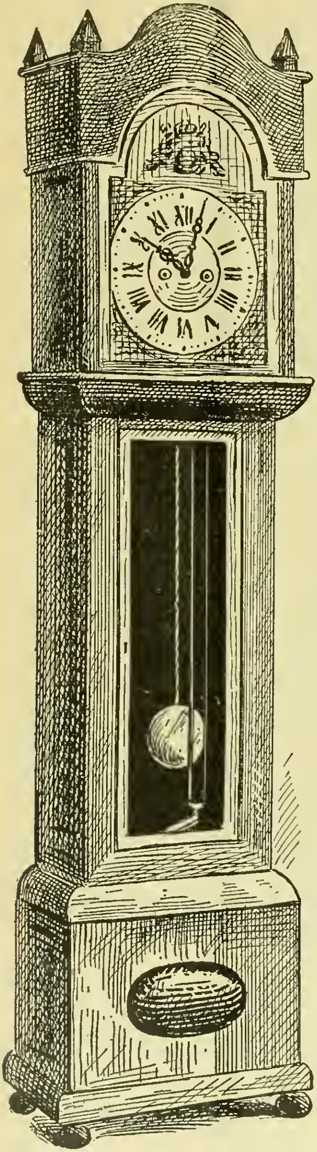

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SARAH A. CHAPPELL.

FROM MANY FIELDS

A Good Year for Bees.

Last year was a good honey-year for Old Missouri. I had 16 colonies of bees, spring count, increased to 32, and got 2000 pounds of extracted and 200 pounds of comb honey from them. I have been in the bee-business for 15 years, and this is the largest average I ever got.

Two years ago all of my bees died excepting 7 colonies. This is a very cold winter for bees here.
John N. Michael.
Caldwell Co., Mo., Feb. 11.

Cold Winter in Maryland.

We have just passed though one of the coldest winters, up to a few days ago, since 1880. The cold weather commenced about the middle of November and kept up until about Feb. 5. On Jan. 1 it was nice and warm, and on the 21st, 22d and 23d of January there was a little thaw. Sometimes the thermometer was down as low as 20 below zero. I find a great many bees are dead throughout the country. Last Saturday afternoon I drove up to my farm, and found only 4 colonies dead out of my apiary of 40 colonies. I fed them up in the fall, and protected them from the north winds. I have a few at my home, and they are all in good shape. I put them into the cellar during the cold, and carried them out when there would be a warm spell, but they were few and far between.

I was in Washington, D. C., Jan. 21, 22, 23, 24 and 25, and on Sunday the 24th I went about 22 miles north of Washington to visit and old friend, A. S. Dalby, a bee-keeper, and he told me that he thought there were a great many dead bees in his neighborhood. A lady in Washington said she found 4 of her colonies dead out of 32. If we do not have a very early spring for them to breed up good and strong we can't expect a big crop of honey.

I find my colonies short of bees, and lots of dead ones in the hives. We have good prospect for a big crop of clover. I have about 9 acres of alsike clover on the farm, and a few acres of crimson clover to start with.
L. A. Hammond.
Washington Co., Md., Feb. 8.

Flies, Not Drones.

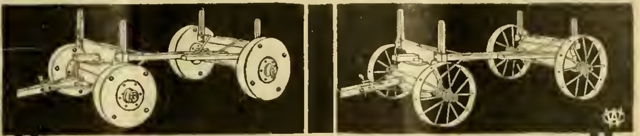
On reading the item on page 99 ("Drones as Gatherers"). I wished I was a Mr. Hasty, or some one else so I could say what I think and no notice would be taken of it! Yet I will venture to say that those writers would better put their spectacles on before some one calls them novices, for I well know some one would call me a novice were I to write such for publication. Sure, they look very much like a drone, but are far from being one. Wings long, and large in body, but antennæ are long and very pointed, needle-like. But they are flies all the same. If they will catch one and send it to Prof. Cook they will be convinced.

Bees are wintering well.
A. Y. Baldwin.
DeKalb Co., Ill., Feb. 15.

A Good Season with the Bees.

The past season was one of unusual worth and interest to bee-keepers. There was an almost uninterrupted honey-flow from May to November, and the bees were gathering pollen from the chrysanthemums as late as Nov. 21, consequently the largest crop for many years was harvested.

Basswood was the only source that I know of that did not enter the contest for furnishing the bees with nectar. Starting in the spring with 12 colonies, I increased to 38 in spite of judicious doubling up, manipulations of every kink that I know of, and runaways. I "took" 1200 pounds of surplus, for all of which I found a ready local market at 12½ cents for chunk and 15 cents for the comb, not-



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withstanding the fact that everybody that had bees had plenty of honey.

I had been reading the American Bee Journal for a year, and had secured a copy of the Langstroth book, else I should have been "lost in the fog," for they swarmed and swarmed; commencing May 25 they continued to swarm all kinds of swarms, about 30 in all, until the midst of a short drouth, July 15, after which I had a chance to rest from hive-building and "hiving."

The 38 colonies were all enjoying a fine flight to-day after their 4 weeks of imprisonment, during which the thermometer dropped to 20 below zero, and the hives became badly ice-bound across the entrances, but the bees were working like Trojans at house-cleaning, so they will go into the cold spell, that is coming on to-night, with clean quarters and a good chance to "weather it" through to fruit-bloom, or feeding-time.

T. A. WELDEN.

Harrison Co., Mo., Feb. 6.

Honey-Tank—Discouraging Outlook.

I am very much interested in Mr. R. C. Aikin's paper on the production of extracted honey, page 68, because I have been for several years working along similar lines, and I think I have succeeded in a tank with a double bottom, in which are a series of partitions, that in connection with a coil of pipe or an oil-stove (or gasoline), I can force a circulation of hot water between the bottoms continually and regulate the heat as I want it. If I do not want the heat I can take off the pipe and stove and use it as and ordinary tank.

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Then the stove is almost a necessity about the honey-house for many other purposes, such as warming bee-feed, melting old combs in hot water, and pressing the same, and many other purposes, without troubling the good wife's kitchen-stove, which is pretty sure to be more or less mussed up when so used.

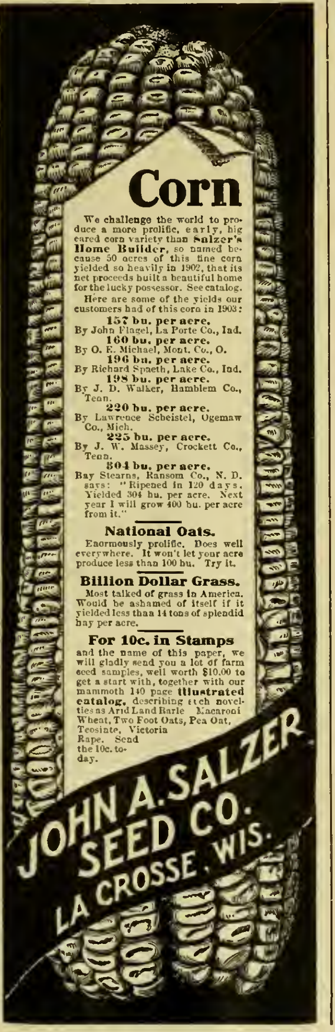
The outlook for so using a tank or anything else this season for honey is very discouraging. We have had only a little over 2 inches of rain so far this season, and nearly all has fallen within the last 10 days. No signs of any growth yet that produces honey. A little shade of green in the wet places. Ordinarily our early bloom is all out by this time, and bees are humming lively.

A. J. Burns.

San Diego Co., Calif., Feb. 10.

The Season of 1903.

I enjoy reading the Bee Journal every week, beginning it 2 years ago this month, 2 months before I had any bees. I bought my first 2 colonies the following May, and have had 2



Corn

We challenge the world to produce a more prolific, early, big eared corn variety than **Salzer's Home Builder**, so named because 50 acres of this fine corn yielded so heavily in 1902, that its net proceeds built a beautiful home for the lucky possessor. See catalog.

Here are some of the yields our customers had of this corn in 1903:

157 bu. per acre.
By John Flagel, La Porte Co., Ind.
160 bu. per acre.
By O. E. Michael, Mont. Co., O.
196 bu. per acre.
By Richard Spaeth, Lake Co., Ind.
198 bu. per acre.
By J. D. Walker, Hamblem Co., Tenn.
220 bu. per acre.
By Lawrence Scheistel, Ogemaw Co., Mich.
225 bu. per acre.
By J. W. Massey, Crockett Co., Tenn.
304 bu. per acre.
Bay Stearns, Ransom Co., N. D. says: "Ripened in 120 days. Yielded 304 bu. per acre. Next year I will grow 400 bu. per acre from it."

National Oats.

Enormously prolific. Does well everywhere. It won't let your acre produce less than 100 bu. Try it.

Billion Dollar Grass.

Most talked of grass in America. Would be ashamed of itself if it yielded less than 14 tons of splendid hay per acre.

For 10c. in Stamps

and the name of this paper, we will gladly send you a lot of farm seed samples, well worth $10.00 to get a start with, together with our mammoth 140 page **illustrated catalog**, describing such novelties as Arid Land Barle Macaroni Wheat, Two Foot Oats, Pea Oat, Teosinte, Victoria Rape. Send the 10c. today.

JOHN A. SALZER SEED CO.
LA CROSSE, WIS.

A Planet Jr. For Every Garden.

The No. 25 Planet Jr. is a combination tool for large family gardens. The illustration to the left suggests its several uses as Hill and Drill Planter, Single and Double Wheel Hoe, Cultivator and Plow. In planting in hills 4, 6, 8, 12 or 24 inches apart, in drill seeding, killing weeds, scuffling, cultivating, furrowing, ridging, working between and astride the rows, it combines in one tool almost universal usefulness in the garden.

No. 16 Planet Jr. is an admirable Single Wheel Hoe, Cultivator, Rake and Plow. Note its equipment. Its handles adjust for height, the wheel for depth, and by setting the wheel to one side both sides of the row can be cultivated at one passage.

Planet Jr. 1904 Catalogue

shows forty different machines, including Seeders, Single and Double Wheel Hoes, Hand, One and Two Horse Cultivators, Horse Hoes, Beet Sugar Cultivators, etc. Over 100 illustrations, including 16 beautiful half tones of home and foreign farm and garden scenes. Mailed free to all.

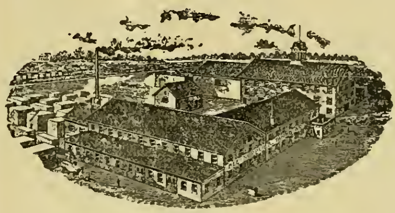
S. L. ALLEN & CO.,
Box 1108-K
Philadelphia, Pa.

Please mention Bee Journal when writing.

Weiss' Foundation

Is guaranteed to stand at the head for quality and workmanship, as it is made by the latest process sheeting, and purifying wax, and will defy competitors in its quality and purity. Send for Sample and Catalog, and be your own judge. **WORKING WAX A SPECIALTY.** Friend Bee-Keeper, now is the time for you to send in your wax and have it worked into Foundation. **HIGHEST PRICES PAID FOR BEESWAX** Cash, 32c; trade, 33c. Impure wax not accepted. A full line of BEE-SUPPLIES.

AUGUST WEISS, Greenville, Wis.



KRETCHMER MFG. CO.,
RED OAK, IOWA.

BEE-SUPPLIES!

We carry a large stock and greatest variety of everything needed in the Apiary, assuring BEST goods at the LOWEST prices, and prompt shipment. We want every bee-keeper to have our FREE ILLUSTRATED CATALOG, and read description of Alternating Hives, Ferguson Supers, Etc. **Write at Once for Catalog.**

AGENCIES.

Kretchmer Mfg. Co., Chariton, Iowa.
Trester Supply Co., Lincoln, Neb.
Shugart & Ouren, Council Bluffs, Iowa.
Chas. A. Meyers, Leipsic, Ohio.

DITTMER'S FOUNDATION RETAIL AND WHOLESALE

Has an established reputation, because made by a process that produces the CLEANEST AND PUREST and in all respects the best and most desirable. Send for samples. Working wax into foundation for cash a specialty. Beeswax always wanted at Highest Price.

A Full Line of SUPPLIES, Retail and Wholesale.

Send at once for Catalog, with prices and discounts.
E. Grainger & Co., Toronto, Ont., Sole Agents for Canada.

GUS. DITTMER, Augusta, Wis.

BINGHAM'S PATENT Smokers
25 years the best.
Send for Circular.
25Atf T. F. BINGHAM, Farwell, Mich.

Pearl Ring Free

Cut out this ad. and send it with name and address for one to
A. R. Wehoskey, Providence, R.I.

Bee-Supplies Exclusively!

A Complete Line of LEWIS' fine BEE-SUPPLIES.
DADANT'S FOUNDATION.
BINGHAM'S Original Patent SMOKERS and KNIVES.
ROOT'S EXTRACTORS, GLOVES, VEILS, etc.
QUEEN-BEES and NUCLEI in season. In fact, anything needed in the "Bee-Line," at
FACTORY PRICES HERE IN CINCINNATI,
Where Prompt Service is yours, and Freight Rates are Lowest. Special Discount for Early Orders. Send for Catalog.

THE FRED W. MUTH CO. We're successors to nobody / Nor nobody's successors to us. 51 Walnut St., CINCINNATI, O.

IT'S FUN
to get high per cent hatches.
GEM INCUBATORS
Wake every germ and hatch profit-fetching chicks that live. Learn all about em in free catalog. Write now.
The Gem Incubator Co.
Box 52 Dayton, O.

Please mention Bee Journal when writing

NO GAS TO KILL
Very little lamp gas in an incubator egg chamber often kills every germ. No gas can possibly creep into the
SURE HATCH INCUBATOR
because it's heated by our rustless, heavy copper, hot water circulator. Don't waste money and lose good eggs experimenting with poor incubators. Send for free catalogue, B 10 and learn why the Sure Hatch hatches *sure*. Sure Hatch Incubator Co., Clay Center, Neb. and Indianapolis, Ind.

PEACH TREES
Hardy, fruitful kinds. Honest values, 5c each. Apple trees, 5½c. Concord grapes, $20 per 1000. Russian Mulberry and Black Locust, $1.40 per 1000. Rambler roses, 25c. $10 orders prepaid. Catalog free.
Gage County Nurseries
Box 646, Beatrice, Neb.

A THOUSAND DOLLAR EGG
—a touching story of devotion telling how Mandy paid the mortgage and saved the farm Tells how to make money from poultry. Also Egg record and Calendar for 1904. Mailed free. Geo. H. Lee Co., Omaha, Neb.

MINSHALL'S BOOK ON POULTRY FOR 1904
It contains life-like illustrations of 33 different breeds of Chickens, Turkeys, Geese, Ducks; the price of same; how to raise poultry successfully and how to treat diseases common to them. All sent for 6c postage,
S. MINSHALL, BOX 451 I, DELAVAN, WIS.

BARGAINS IN PLANTS AND TREES
worth double the money, by mail postpaid

200 Marie Strawberry	$1 00	20 Wilder Currants	$1 00
100 King Raspberry	1 00	20 Fay "	1 00
100 Ea. King Blackberry	1 00	20 Elberta Peach	1 00
100 Ohmer "	1 00	10 Pear assorted	1 00
20 Niagara Grapes	1 00	10 Cherry assorted	1 00
20 Worden "	1 00	15 Apples "	1 00

Everything for the fruit grower best varieties cheap. Free catalog of great bargains—3 new strawberry plants free for 6 names of fruit growers and 2c stamp.
W. N. SCARFF, NEW CARLISLE, OHIO

APPLE
APPLE TREES THAT BEAR
well and stand the rigors of wind and weather, heat and drought are the varieties we sell. Grown in blizzard belt of northern Iowa means hardy stock. Free catalog and leaflet telling how to graft in summer without wax or string
The Gardner Nursery Co. Box 715, Osage, Ia.

SCRAWNY CHICKS
lack sufficient nourishment. Fatten them —make them healthy—feed them Mrs. Pinkerton's Chick Food. It prevents bowel trouble. It's all food—easily digested. Write for catalog of prize birds at St. Louis and Chicago 1903 Shows. Gives prices and valuable information.
Anna L. Pinkerton Company, Box 27, Hastings, Neb.

Never Disappoints
When you put eggs—fertile eggs into
Ormas Incubators
you are never disappointed with the results. Not only hatches them all; but hatches chicks that are strong, lively and vigorous. Guaranteed. The cheapest, good incubator made. Catalog Free.
A. BANTA, LIGONIER, INDIANA

Please mention Bee Journal when writing Advertisers.

years' experience. Last season I increased from 4 to 10 colonies, and had some 200 pounds of very fine honey, mostly extracted. There was no honey-flow in this locality after Aug. 1. I had to feed 200 pounds of sugar for winter stores. My increase was made by 2 natural swarms and 4 nuclei formed in June. Two of my old colonies, which I kept from swarming, gave me as much honey as the other 8.

One of my young queens had 3 frames well filled with eggs when 8 days old. She kept 9 frames filled with eggs and brood until September; no brood reared in any hives after Sept. 1. White clover and basswood made a good honey-flow.

I hope for a good season this year.

Becker Co., Minn., Feb. 8. F. L. DAY.

Hard Winter—Bees Doing Nicely.

We have had a hard winter here, snow on the ground since Nov. 20. I winter my bees on the summer stands and they have not had a flight since that time. The most of the time they have been completely covered with snow. I looked at them one sunny day this week, and they are doing nicely so far.

C. H. BENSON.

Barry Co., Mich., Feb. 13.

Some Kinks on Bulk Comb Honey.

Being interested in reading the items "From Many Fields" in the American Bee Journal, I thought perhaps a kink or two I learned from an eccentric friend may assist both veteran and novice another season, should the honey harvest be so large that enough sections could not be supplied by the dealers in time to store the honey, or the prices for them be so high that cash could not be spared for them. "Everything full," and two or three hundred dollars worth of honey lost for want of sections and supplies, is too bad. Perhaps the losses in some places were larger, and others smaller, where the great honey-flow extended.

Howe could not make his machine sew with the eye in the head, so he placed it in the point of his needle, and was successful. By just a little reversion of the super furniture as much more honey can be produced as if they are fitted with sections. My friend sometimes gets—and he won't use smoke or veil—then he gets stung. One time he would not use sections in his supers, so he placed starters on the section-holders and turned them upside down, letting the ends rest on the tin rabbets—and he got honey, bulk honey. Kink 1.

In preparing frames for bulk honey it is sometimes difficult to fasten the foundation in the grooves; it won't roll fast, and the hot wax melts it. My friend is an expert at fastening the foundation in the grooves of the shallow frames. He fills the grooves with flour-paste, places the starters in, and lets them stand so until set. Kink 2.

In producing bulk honey, two sets of frames are necessary, *a la* Hyde; one set to be cleaned off by the bees after the honey is taken out, in order to place another lot of starters in them; and so repeat.

When there is a great lot of swarming in proportion to the supplies on hand, I would suggest the use of deep supers for bodies, with queen-excluders over them, and 2 or 3 supers run for comb or bulk honey on top of the excluders. Three or 4 swarms could be placed together on one stand, and at the end of the season perhaps the super used for a brood-chamber would not be quite filled with comb; this could be united with a medium strong colony for winter. Honey has been produced by this method when very few colonies in the apiary filled a super. Besides, the bees are all used for the honey harvest, and no increase of colonies in the apiary.

There is a bee-hive that should, I think, receive more prominence than it seems to get. I refer to the "Acme Hive." Those who wish to try a 7-inch closed-end hive will find this to answer their purpose. No wedges or tomfoolery about it. I often wondered why other kinds of covers are made with a theory that they should not twist, when this one never twists or warps, and those that should not, do; besides, it has a useful reversible

TENNESSEE QUEENS
Daughters of Select Imported Italian, Select Long-Tongue (Moore's), and Select Golden, bred 3¼ miles apart, and mated to Select Drones. No impure bees within 3 miles, and but few within 5 miles. No disease; 31 years' experience. All mismated queens replaced free. Safe arrival guaranteed.

	Price before July 1st. 1	6	12	After July 1st. 1	6	12
Untested	$ .75	$4.00	$7.50	$ .60	$3.25	$ 6.00
Select	1.00	5.00	9.00	.75	4.25	8.00
Tested	1.50	8 00	15.00	1.25	6.50	12.00
Select Tested	2.00	10 00	18.00	1 50	8 00	15.00

Select Breeders ....$3.00 each
Send for Circular.
JOHN M. DAVIS, Spring Hill, Tenn.
Please mention Bee Journal when writing

TREES THAT GROW
Hardy varieties that yield big crops. Grafted Apple 5½c; Budded Peach 5c; Concord Grapes 3c; Black Locust Seedling, $1.35 per 1000. Send for
GERMAN NURSERIES We Pay the Freight
Illustrated catalogue, English or German, free.
CARL SONDEREGGER
Box 99 Beatrice, Neb.

This is the Limit
A Hot Water, Self-Regulating, 50 egg Incubator $4.50. $3.00 and up for Brooders. All on 30 DAYS' TRIAL. No agents. You pay no middlemen's profits. See catalogue for "100% Hatches." Write
BUCKEYE INCUBATOR COMPANY., Box 53, Springfield, Ohio

PAGE
NO FARMER CAN AFFORD
NOT to know about the EXCLUSIVE Features in Page Fence even though he never buys it.
PAGE WOVEN WIRE FENCE CO., Adrian, Michigan.

No Cold Corners
in Iowa Round Incubators
No half warmed eggs. By "round" system every egg gets same heat—bigger per cent of eggs hatched. Special regulator overcomes atmospheric changes. Free catalog tells the whole story.
IOWA INCUBATOR COMPANY, BOX 198, DES MOINES, IOWA

Bee-Keepers!
Send for our FREE CATALOG. It will tell you how to put foundation in four sections at once; and the only way to get a full section of honey.
We sell SUPPLIES AT FACTORY PRICES.
A. COPPIN, Wenona, Ill.
4Atf Please mention the Bee Journal.

A HEAT HOLDER
Great Scott Incubator case has no invisible cracks and porous seams to waste the precious heat that starts chick germs into life. The Great Scott Incubator is rigid; strong; easily regulated; causes no worry; gives high per cent hatches. Ask now for free catalogue.
Scott Incubator Company,
Box 83 Indianapolis, Indiana

$12.80 For 200 Egg INCUBATOR
Perfect in construction and action. Hatches every fertile egg. Write for catalog to-day.
GEO. H. STAHL, Quincy, Ill.
45A26t Please mention the Bee Journal.

bottom-board, and can be supplied with 4x5 inch sections, which can be used also for bulk honey, or a super fitted with 4¼x4¼ sections. I think hundreds of bee-keepers would be thankful to read a description of the Acme hive as supplied for the Colorado climate.

I might have sent you a few lines on the humbug of bee-foods, but I doubted if I knew enough about them, except to ask questions, else I may be exploded like our brother who caught butterflies and got rid of moths! I think, however, he deserves company. What a lot of information his article drew out from "Virginia!" Well, if a few lines could bring something definite with regard to bee-feed, I wish I could write them. A La Kink.

Prowers Co., Colo., Feb. 8.

This Lightning **Lice Killing Machine** kills all lice and mites. No injury to birds or feathers. Handles any fowl, smallest chick to largest gobbler. Made in three sizes Pays for itself first season. Also *Lightning Lice Killing Powder, Poultry Bits, Lice Murder, etc.* We secure special low express rates. Catalog mailed free. Write for it.
CHARLES SCHILD, Ionia, Mich.
Please mention Bee Journal when writing.

CONVENTION NOTICES.

Michigan.—The Northern Michigan bee-keepers will hold their annual convention March 30 and 31, 1904, in the Montague Hall, 127 Front St., Traverse City, Mich.

Geo. H. Kirkpatrick, Pres.

Rapid City, Mich.

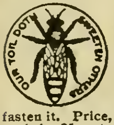
Utah.—The spring convention of the Utah Bee-Keepers' Association will be held April 5, at 10 a.m. and 4:30 p.m. Among other important questions to be considered will be the World's Fair, our State Fair, and the Portland Fair of 1905. We also desire to formulate some plan, if possible, to further increase the fraternal interest for the mutual benefit of our bee-keepers. We cordially invite all bee-keepers to be present. We also invite them without delay to send in their views on these and other topics. The convention will be held in the City and County building, in Salt Lake City.

Salt Lake City, Utah. E. S. Lovesy, Pres.

FOR SALE!

3 acres of land having a building on it that was put up for a bee-shop, 20x40, two stories high, basement under all, windows reversible; good water, inside living rooms up-stairs. There are about 65 fruit-trees that bear; good location for bees; one mile from town and railroad station. Good, level roads. 80 rods from lake, and good fishing. Will sell for $350 cash, or $400 if on time; $150 down, balance $100 a year, at 7 percent interest. I also have 5 acres within 80 rods of above property (that is low land, will make good pasture-lot), that I will sell for $125. Good titles given. For further particulars, write to S. D. KAUFFMAN,
10A2t Bellaire, Antrim Co., Mich.
Please mention Bee Journal when writing.

DAVENPORT,
—IOWA—
Send your orders for everything in BEE-KEEPERS' SUPPLIES to the city nearest to you. Save Freight and get prompt service. We are headquarters for LEWIS' HIVES AND SECTIONS. DADANT'S FOUNDATION. ROOT'S SMOKERS, EXTRACTORS, ETC., ETC.
LOUIS HANSSEN'S SONS,
213-215 W. 2d Street, Davenport, Iowa.
5A26t Please mention the Bee Journal.


OUR TOIL DOTH SWEETEN OTHERS

A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10c; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

Texas Queens.
3 and 5 banded Goldens from a reliable breeder. You all know him—DANIEL WURTH—the Queen Specialist—who fills orders by Return Mail. I am here to stay, and thank my many friends and patrons for their liberal patronage in the past. Wishing you all a Happy New Year, I am ready as usual to furnish you with the best of Queens. Tested, in March and April, $1.25 each; Untested, in April and May, $1.00 each; 6 for $5.00. Breeders, yellow all over, $3.00 each. I am booking orders for early delivery
DANIEL WURTH, Karnes City, Tex.
3D6t Please mention the Bee Journal

Oldest Bee-Supply House in
—MISSOURI—
Your wants fully supplied with anything needed in the Apiary. FULL STOCK OF A. I. ROOT CO'S GOODS; Danzenbaker Hives, etc. Let us mail you our 40-page Catalog. FREE.
JOHN NEBEL & SON,
7Dtf HIGH HILL, Montg. Co., MO.
Please mention Bee Journal when writing.

Eggs from S. C. W. and Buff Leghorns, Barred Rocks, and White Wyandotte. Write for prices.
F. F. ALDERFER,
R.F.D. No. 1. Souderton, Pa.
11A4t Please mention the Bee Journal.

Chunk Honey For Sale
—Write for prices.—
ROBERT PROVAN, Rt. 3, Traer, Iowa
11A2t Please mention the Bee Journal.

For Sale 2000 pounds Extracted Choice Clover HONEY in cases of two 60 lb. cans each; 8c per pound; two cans or more, 7½c per pound.
DANIEL S. KITSON,
11A4t R.F.D. No. 1, East Jordan, Mich.
Please mention Bee Journal when writing.

Wanted to Buy! 100 colonies, or less, of BEES for SPOT CASH, in or near Northampton Co., Pa. State kind of hives used and price wanted. Crystal Poultry Yards,
88 So. Franklin St., Wilkesbarre, Pa.
8A4t Please mention the Bee Journal.

Wholesale Honey.
We need a few thousand pounds more of Comb Honey for our trade in St. Louis and Chicago. Any person, any where, who wants to cash up his Honey Crop at a wholesale price, we would be pleased to hear from, with complete description and lowest price delivered to their depot. West of Kansas City and Omaha it should be in car-lots.
Thos. C. Stanley & Son, Manzanola, Colo.
Please mention Bee Journal when writing.

WANTED! FANCY COMB HONEY
In no-drip shipping-cases. Also Amber Extracted in barrels or cans. Quote your best price delivered Cincinnati. The Fred W. Muth Co.
32Atf Front and Walnut, Cincinnati, Ohio
Please mention Bee Journal when writing

If you want the Bee-Book
That covers the whole Apicultural Field more completely than any other published,
Send $1.20 to
Prof. A. J. Cook, Claremont, Cal.,
—FOR HIS—
"Bee-Keeper's Guide."
Liberal Discounts to the Trade.

WE SELL ROOT'S GOODS IN MICHIGAN
Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Four percent off for cash orders in December. M. H. HUNT & SON,
Bell Branch, Wayne Co., Mich.
Please mention Bee Journal when writing.

HONEY AND BEESWAX

MARKET QUOTATIONS

Chicago, March 8.—It is difficult to get more than 12c per pound for any lot of white comb honey, with sales chiefly at 11c; even at this price it does not work off as fast as owners wish it would. Selections in the most desirable grades bring a little higher price in small quantities; off grades sell at 1@2c per pound less. Extracted honey plentiful and slow of sale; white brings 6@7c; amber, 5@6c, according to quality and style of package. Beeswax active at 30c. R. A. Burnett & Co.

Cincinnati, Feb. 8.—There is a fair demand for honey, but nearing the end of the season for comb honey, with large supply, has pressed the prices; fancy white, 13@14c; amber, in barrels, 5¼@5¾c; in cans, ½c more; alfalfa, water-white, 6@6½c; fancy white clover, 7½@8c. Beeswax, 30c. C. H. W. Weber.

Philadelphia, March 9.—There has not been much change since last quotations on comb honey. Small lots have been arriving freely, but principally of poor quality, and have been sold at whatever the commission man could get for them, ranging from 10c up. We quote fancy comb honey, 14@15c; No. 1, at 12@13c; amber, at 10@11c. Extracted honey, white, at 7½@8c; amber, 6@7c; Southern, 5@6c, according to the package. Beeswax selling readily at 31c. We are producers of honey but do not handle on commission. Wm. A. Selser.

Cincinnati, Mar. 4.—The demand for honey is brighter than it has been in the past 60 days. We continue to offer amber extracted in barrels at 5½@6½c, according to quality. White clover extracted is a drag on the market at 6½@8½c in barrels and cans. Comb honey seems to be reviving at 13½@15c for fancy.

Beeswax, 30c. The Fred W. Muth Co.

Albany, N. Y., Feb. 1.—Honey demand very light. Prices of comb honey are largely now what the buyers will offer—from 10@15c. We look for better demand when weather is warmer. Extracted doing some better at 7c for white, 6½c for mixed, and 5½@6c for dark and buckwheat. Beeswax, 28@30c.

H. R. Wright.

Boston, March 7.—The condition and price of the market on honey has not altered. Strictly fancy Eastern honey is scarce. Western honey will not bring as much here. We quote fancy white in glass-front cases at 16c; No. 1, at 15c. Supply is ample, and demand light at this time. Extracted, water-white, 8c; light amber, 7@8c; with but little call for dark Florida.

Blake, Scott & Lee.

Kansas City, Feb. 24.—There is no change in the price of comb honey; the supply is large. The receipts of extracted are large and the demand very light. The market price is: Fancy No. 1, comb, 24-section cases, $2.25; No. 2 stock, $2.00. Extracted, white, per pound, 6@6½c; amber, 5½@6c. Beeswax, 30c.

C. C. Clemons & Co.

New York, March 7.—The market on comb honey is decidedly dull. There is some demand for white honey, but prices are ruling rather low. We quote fancy at 13@14c; No. 1, at 12c; amber, at 11c, and in round lots even these prices have to be shaded in order to effect sales. There is no demand at all for dark and buckwheat comb honey, and it looks as if some of it would have to be carried over. We quote nominally at 9@10c per pound.

There is a fair demand for extracted honey, at irregular prices, fancy white bringing 6½@7c; light amber, 5½@6c; other grades, 5@5½c; and Southern, common to fair, 50@55c per gallon. Beeswax firm at from 29@30c.

Hildreth & Segelken.

San Francisco, Feb. 17.—Extracted, white, 5½@6c; light amber, 4½@5c; amber, 4@4½c; dark amber, 3½@4c. White comb, 12½@13c; amber, 9@11c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

The steamer Newport, sailing on Saturday, the 6th, took 115 cases extracted honey for New York. Local demand is light. Extracted is not in heavy spot supply. The prospects of an early cleaning up of comb honey are not at the moment particularly encouraging.

HONEY AND BEESWAX
When consigning, buying or selling, consult
R. A. BURNETT & CO.,
199 South Water St. Chicago, Ill.

The Best Bee-Goods in the World....

are no better than those we make, and the chances are that they are not so good. If you buy of us **you will not be disappointed. We are undersold by no one.** Send for new catalog and price-list and free copy of THE AMERICAN BEE-KEEPER; in its thirteenth year; 50 cents a year; especially for beginners.

—THE—

W. T. Falconer Mfg. Co.,
JAMESTOWN, N. Y.

W. M. GERRISH, Epping, N.H., carries a full line of our goods at catalog prices. Order of him and save the freight.

I. J. STRINGHAM, 105 Park Place,
NEW YORK

Manufactures and carries in stock every article a bee-keeper uses. BEES AND QUEENS IN SEASON.
Apiaries—Glen Cove, L.I. Catalog free.

ST. LOUIS, 1904.

Bee-Keepers' Supplies Galore.

Catalog Free.
A No. 1 Smoker by mail, $1.

Bees, Honey and Beeswax bought and sold for cash.

LEAHY MFG. CO.,
1 ALTA SITA, EAST ST. LOUIS, ILL.

CAPT. J. E. HETHERINGTON'S BEES

FOR SALE—600 colonies from the Virginia apiaries belonging to the estate of the late Capt. J. E. Hetherington. These bees are Carniolans, bred from carefully selected queens, are perfectly healthy, and in the Hetherington-Quinby hive. They have had the personal care of Capt. Hetherington. For further information address, **H. B. HETHERINGTON,**
After April 1st, Cherry Valley, N. Y.
HARDESTY, Warren Co., VA. 11A3t

DR. PEIRO'S
OXYGEN
TREATMENT for
WEAK LUNGS

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OF ALL KINDS.

Langstroth on the Honey-Bee—Revised
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

DADANT & SON, Hamilton, Hancock Co., Ill.

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Of course you have our New 1904 Catalog, 68 PAGES

Beginners Should Use Lewis' Appliances.
OLD TIMERS DO.

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Our SECTIONS Are Superb,
Our HIVES far better "than Father used to make."

PROMPT SHIPMENTS.

Your Bees Won't Sting You
IF YOU GIVE THEM LEWIS' GOODS.

Chicago-Northwestern Report.
(See page 217.)

Foul Brood.
R. C. AIKIN.

AMERICAN BEE JOURNAL

WEEKLY—$1.00 A YEAR.

Published by GEORGE W. YORK & CO., 334 Dearborn Street.

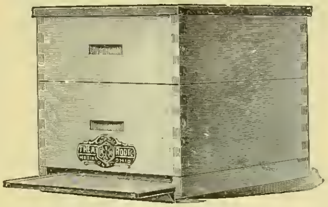
44th Year. CHICAGO, ILL., MARCH 24, 1904. No. 12.

WEEKLY

APIARY OF LOUIS C. KOEHLER, OF MANITOWOC CO., WIS.
(See page 212.)

THE VOICE OF THE PEOPLE

DANZENBAKER'S HIVE.



MORE HONEY. BETTER PRICES.

WE HAVE TOLD YOU SOME THINGS

—ABOUT THE—

DANZENBAKER HIVE

FOR COMB HONEY.

NOW SEE WHAT OTHERS SAY.

MORE HONEY.

UNION BRIDGE, MD. Feb. 9, 1904.

The A. I. Root Co., Medina, O.

Gentlemen:—I saw in a recent issue of your paper that you have a department called "Reports Encouraging." I shall send you my report.

I use the Danzenbaker hive and will give you report of the same, as the few dovetailed hives that I use do not compare at all with the Danzenbaker. One colony gave me over one hundred pounds No. 1 white honey and the rest averaged about sixty, with an increase by natural swarming of one hundred per cent. A friend of mine who uses all sorts and kinds of hives in his apiary succeeded in making scarcely enough honey to pay for the foundation used in the sections. This was about two miles from my apiary. Long live the Danzenbaker hive! It is just the thing for this locality.

Yours truly,
J. B. HOLLOPETER.

MALLET CREEK, O., Sept. 25, 1902.

I have now 250 colonies of bees, of which 170 are in the Danzenbaker hives, and shall have all my bees in Danzenbaker hives next spring. During this past poor season, 30 or 40 of the colonies in the Danzenbaker hives gave over 100 lbs. surplus. On the average I get more than double the amount of honey from these colonies that I do from those in the old chaff hives. With a 7-inch telescopic cover, the Danzenbaker hive winters the bees better than the chaff hives.

VERNON BURT.

MORE HONEY AND BETTER PRICES.

I have used both square and tall sections in all my apiaries five years, and know from practical experience that it will pay to discard the 4¼ sections, and use only 4x5 sections, and the Danzenbaker hive with the fence separator. They have made enough more this season in the same yard to pay for the hives. I have made *more money* this season per hive than I have any previous year in my 15 years of bee-keeping. Fifteen of my strongest Danzenbaker hives made me a ton of honey. When it comes to sales I get more for the 4x5 sections, and have no work in cleaning them. I ship them as I take them from the super. This is not the case with the 4¼ section. I make honey to sell, and anything that sells the best, and for the most money is what I want out of the bee-business. S. D. MATTHEWS.

In Gleanings, p. 931, Dec. 15, 1899.

MOUNTAIN VIEW, N. J., Oct. 6, 1897.

I have run my hives largely with the Danzenbaker sections this year, and shall increase my facilities for the Danzenbaker output next year. I sold all my fancy clover in Danzenbaker sections, glazed, to two fancy grocers in New York, at 20 cts. a section; were retailed at 25 cts. each. My 4¼ sections, unglazed, sold to grocers at 12½ to 13 cts., retailing 16 cts. I furnished cartons with the 4¼, which cost nearly as much as glass. B. F ONDERDONK.

BETTER PRICES FOR DANZY. HONEY.

ROCK VALLEY, N. Y., Feb. 22, 1901.

My bees gathered no surplus after July 1. I had only 1200 lbs., but I obtained a fancy price—15½ for "Fancy" and No. 1 white, and 14½ for No. 2 here at my station for all the Danzenbaker 4x5 plain sections, used on your hives, while I got only 14 and 13 cts. per lb. for the 4¼x4¼ square sections, and I consider that much difference is worth looking after—don't you? The Danzenbaker hives doubled up, two brood-chambers, are in fine condition, even better than my double-walled hives. I intend to build a bee-cellar and work off my double-walled hives as fast as I can, and get the Danzenbaker hives. Very truly yours,

J. L. HAIGHT.

It is not claimed that so large an advance in price as is mentioned above can usually be obtained for honey in Danzenbaker sections, but because it is more uniformly fancy grade, and of general better appearance it commands the highest prices and a more ready sale in a dull market than ordinary honey.

A RECENT ORDER.

INDIANAPOLIS, IND., Feb. 3, 1901.

The A. I. Root Co., Medina, O.

Dear Sirs:- Please ship to me as soon as convenient: 500 Danzy. AD64M hives. Yours,

WALTER S. POUDER.

(This is in addition to all other orders.)

64-PAGE BOOK.

Mr. Danzenbaker's little book, "Facts About Bees," containing 70 pages, giving full particulars regarding this hive and system, is indeed full of facts. If one follows the directions clear through, he is sure to produce a strictly first-class article of comb honey, providing of course there is any honey to be had. This unique little book will be sent free to all who apply for it.

Bee-keepers are raising honey for the money there is in it, or for the pleasure they get out of it. It is conceded by all who have tried this system that it is highly profitable. Reading over letters from the users of this hive who tell of securing large crops of honey almost free from propolis makes us think that the bee-keeper who is in the business for pleasure would be highly gratified with the hive also. What is more satisfying than to take off well-filled supers of snow-white sections free from the propolis that is so often found on sections in cases that are poorly constructed and adapted for the production of a fancy article?

SPECIAL NOTICE.

The great popularity of the Danzenbaker hive has brought the shallow brood-frame and the tall plain sections into prominence. It must be remembered that no other hive contains the essential features of the Danzenbaker. The success of this system depends on having everything just right, so you should place your order for the Danzenbaker hive with our main office, or any of our branches or regular agents.

THE A. I. ROOT COMPANY,

BRANCHES: Main Office and Works, Medina, Ohio, U. S. A. BRANCHES:

CHICAGO, ILL., 144 East Erie St. | SYRACUSE, N. Y. | ST. PAUL, MINN., 1024 Miss. St. | San Antonio, Tex., 438 W. Houston.
MECHANIC FALLS, ME. | PHILADELPHIA, PA., 10 Vine St. | HAVANA CUBA, San Ignacio. | Washington, D. C., 1200 Md. Av., S.W

(See list of Jobbing Agents in American Bee Journal, Jan. 7, page 2.)

ESTABLISHT IN 1861
AMERICAN BEE JOURNAL
THE OLDEST BEE-PAPER IN AMERICA
Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

GEORGE W. YORK, Editor. CHICAGO, ILL., MARCH 24, 1904. Vol. XLIV—No. 12.

Editorial Comments

The Third Double Number.

Yes, this is the third double number of the American Bee Journal for this year. It completes the report of the last Chicago-Northwestern convention. We would like to continue these double-size copies once a month, but the increased expense will hardly allow it, we fear. But judging from the amount of copy we still have on hand we may be compelled to "double up" some more. However, it will depend a good deal upon the way renewal subscriptions come in. Also new subscriptions. If the financial end of the office can stand the extra expence, we will be glad to get out some more double numbers of the Bee Journal. Will all those whose subscriptions expire please renew promptly? And, if possible, get a new subscriber to send along with the renewal.

Queen's Duty to Lay Drone-Eggs.

J. M. U. says in the British Bee Journal: "We have to recognize the fact that it is part of the queen's duty to lay a certain number of drone-eggs, and that we can not prevent her doing so, whether by using full sheets of foundation or any other means."

Failing Competition in Bee-Keeping.

An item on this subject, which appeared on page 131, has called forth the following from one of the Bee Journal family:

> Under the head of "Failing Competition," I see it is claimed that it costs the farmer bee-keeper more to produce his honey than he sells it for. As I consider myself to come under the head of "farmer bee-keepers," I don't like the idea that I should be producing honey at a loss; neither do I see why it should be so. I should like to see that point explained, and, what is of more importance, a way shown to remedy this state of affairs, if it is proven to be a fact.
>
> There are very few bee-keepers, or rather bee-keeping farmers, here who use movable-frame hives and produce either section or extracted honey, and the demand for section honey is far in excess of the supply. The chunk honey produced in the old-fashioned gum offers practically no competition—I can get 15 cents a section by selling direct to consumers, or 12½ cents from commission merchants; but so far I can sell all I produce to private trade. C. H. KOENTZ.

Notwithstanding our good friend says very properly, that he considers himself in the class of farmer bee-keepers, notice is hereby served on him that he is distinctly out of the class referred to on page 131, in which is the farmer "who takes his honey to the market and sells it for what he can get," meaning, thereby, that he sells it for any old price offered, without regard to value. Moreover, the opening sentence rules him out, which says, "the pity of it being that the very ones who need them most will never see them," because they never see a bee-paper. Not the least esteemed portion of the Bee Journal family is that portion made up of well-informed farmers who use up-to-date methods in obtaining honey and secure up-to-date prices. Unfortunately, however, there are too many like those our friend mentions, and he is specially favored if their crude product chopped out of gums "offers practically no competition." Elsewhere the competition is real hard to meet, for with too many honey is honey, and when any kind of honey is put on the market at a 'way-down price, all other kinds of honey are expected to meet that price. The best remedy, perhaps, is the one that our friend has applied—educating the public to understand the difference between the poorest and the best, thus producing a demand for only the best.

Slumgum for Rheumatism.

In Praktischer Wegweiser a plaster of slumgum spread on cloth is said to be excellent for rheumatism.

Can a Bee-Keeper Afford to Do Without a Bee-Paper?

In these pages the necessity for a bee-book or text-book on bee-keeping has been frequently urged, the beginner being advised that if there be any preference in the matter the bee-book should come before the bee-paper. There is no desire to make any less emphatic the necessity for the book, but it would be a serious mistake to suppose that a book is all-sufficient. The book lays the foundation for a thorough understanding of the paper, the latter supplementing the instructions of the former, making clear the points not fully understood by the beginner, and keeping both beginner and veteran fully informed as to the constant progress being made from week to week or from month to month. Getting the book and doing without the paper would be just a little like getting a team and plow without a man to drive.

A letter lately received from a farmer with several colonies of bees, says he would like to have a bee-paper, but he has so many agricultural journals that he does not feel like spending money for a paper devoted wholly to bees. Possibly the thought is, that if it contained something besides bee-talk he could better afford it. But its exclusive character is the thing that gives its value. The bee-departments of most agricultural papers—if, indeed, they have any such department—are, for the most part, presided over by some editor who knows little about bees, and too often the information given is ludicrously misleading. The farmer is not in much danger of having too many agricultural journals, but no matter how many he has, if he has no more than two colonies of bees, he can not afford to do without a paper specially devoted to their management. Even with no more than two colonies, the difference made in his honey crop will keep up his subscription—sometimes many times over.

A Drone Caught Gathering Honey.

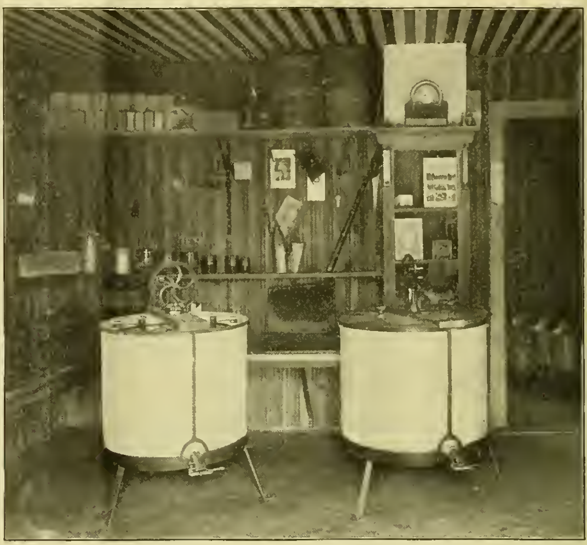
It is possible that if the eyes of bee-keepers were more constantly wide open some things that are generally considered outside the range of possibilities would be found to occur, if infrequently, still frequently enough to be placed in the category of things possible. There is perhaps some hesitancy to mention exceptional occurrences lest one's veracity be questioned. Yet it is not always the part of wisdom to dispute a thing merely because it may not have come within one's range of vision. For years it was the belief that under no circumstances would more than one queen be tolerated in a colony, which belief might have continued to this day if clipping the queen's wings had not made it easy to detect the presence of an intruding queen. Now it is known to be so common that any bee-keeper of considerable experience is pretty sure to have met numerous instances of a division of maternal duties.

Ordinarily, a queen will not demean herself to sting anything less than royalty, but within late years this rule has been found to be not without exception.

On page 11 mention was made of a drone observed in the act of gathering pollen, which mention has called out a somewhat similar observation made by one this side the water, although the knowledge thereof has been hidden in his own bosom, lo these many years. Among those who know him, the word of James A. Green, formerly of Illinois, but now of Colorado, will pass current without challenge. He writes:

> Very few have seen drones perform any labor, and doubtless most bee-keepers would scoff at the idea. I have never seen drones working on flowers, but I have seen a drone gathering honey.
>
> Several years ago, just before the honey-flow from clover began, I had set out for the bees to work on, a quantity of cappings from some extracting done during the winter. As I watched the bees working busily licking up the candied honey, I noticed among them a drone, apparently as industriously engaged as any of them. After watching him for several minutes, to make sure that he was really gathering honey, I caught him and put him into a vial of alcohol, thinking I might send him to some microscopist interested in the anatomy of bees, to see if all his organs were normal. I have never done this, but have the drone yet, at the service of any one who is competent to make such an examination, and wishes to do so.
>
> The subject is probably of little practical value, and yet who can tell what might be the result if we could mate our queens to drones enterprising enough to gather honey for themselves. J. A. Green.

The question arises whether it is from lack of enterprise or from physical disability that a drone does not help himself to honey. Has any one else ever known a drone to take his meals in any other way except directly from the mouth of a worker?



EXTRACTING-ROOM OF LOUIS C. KOEHLER.

Miscellaneous Items

Among the Callers at this office recently were E. K. Meredith, of Kane Co.; W. H. H. Stewart, of Whiteside Co.; E. E. Starkey, of Cook Co.; and F. Grabbe, of Lake Co.—all of Illinois.

* * *

Prof. A. J. Cook, of Los Angeles Co., Calif., wrote us March 11, as follows:

> "We have had another rain. We have had so little this winter that all, especially bee-keepers, have felt blue. But these late rains may yet give us success. We shall be happy to meet just such a disappointment."

* * *

"**Memories of the Wisconsin** and Other Poems" is the title of a booklet of poems written by Mr. Harry Lathrop, one of Wisconsin's favorite bee-keeping sons, who, for several years lately, has been "dropping into rhythm" occasionally. It contains 64 pages, 6x9 inches in size. It is handsomely illustrated, and beautifully printed. Price, 50 cents. Harry Lathrop, Bridgeport, Wis.

* * *

A Milk and Honey Land.—In a Glasgow Sunday-school the lesson bore on the land of Canaan, where it is spoken of as a land flowing with milk and honey.

"What do you think a land flowing with milk and honey would be like?" asked the lady teacher.

"It would be awfu' sticky," responded a wee chap at the foot of the class.

* * *

The Apiary and Extracting-Room of Louis C. Koehler, of Manitowoc Co., Wis., are shown this week. When sending the pictures, Mr. Koehler wrote as follows:

> The two views herewith show our apiary and the extracting-room in the honey-house. Here you can see our two 10-frame honey-extractors. In the back room we have honey storage-tanks. The cans by the stairway are our 50-pound market-cans, of which we have 12.
>
> During the season of 1903 we had a crop of 15,000 pounds of honey, which we received from 252 colonies. This was all sold direct to the consumer.
>
> The round hive shown in the apiary is made of 3-inch cedar staves. The diameter of the brood-chamber is 14 inches, and it is 18 inches high. It had on two 10-frame supers during the honey-flow, each of which was extracted five times. We received from that colony 280 pounds of honey. Louis C. Koehler.

* * *

Mr. Gus Dittmer, of Augusta, Wis., wrote us March 15 that he expected to start the first comb-foundation machine in two or three days, and the others within another week. He will run all machines full capacity, with plenty of help, until he has disposed of all back orders. He expects to run out from 1000 to 1200 pounds daily until caught up. He will then be able to take care of all orders very promptly after that. This would indicate that Mr. Dittmer is recovering very rapidly from his recent fire.

* * *

Joining the National—A Correction.—On page 186, in my reply to "California," I tell him, "to become a member of that Association...... will only cost you a dollar a year, and perhaps heavy lawyers' fees." I don't know whether I wrote it that way, or whether one of those malicious type-setters was improving the opportunity to take out a grudge against me, but this is to inform "California" that it is by no means such an expensive business to break into the membership of the National, and he will get my intended meaning if he will insert the little word "save" between "perhaps" and "heavy." C. C. Miller.

* * *

Beware of the Buzz-Saw.—W. H. Laws, of Bee Co., Tex., wrote us March 7, as follows:

> Mr. W. C. Nutt, of Iowa, but recently located here, who has been a subscriber to the American Bee Journal for nearly 30 years, has just now suffered the loss of his first two fingers on the left hand in a buzz-saw. He desires me to say to all persons who are rigging up machinery to manufacture their own supplies, to beware of the buzz-saw! W. H. Laws.

So here is another argument against home-made hives. Of course, it is not a very effective argument except in the case of the bee-keeper who is so unfortunate as to lose some of his fingers when trying to make his own hives.

* * *

The Farmer as an Advertiser.—In looking over some of our exchange publications, we ran across the following paragraph, taken from Hoard's Dairyman:

THE FARMER HAS MANY THINGS TO SELL, AND SHOULD ADVERTISE.

> The farmer pays but little attention to advertising. He is not used to it, and has not good judgment as to what it will do for him. A few years ago a neighbor had a fine four-year-old Guernsey bull that he wanted to sell to prevent inbreeding. All that the stock-yards people in this city would pay for the animal was $40. We told him that the stock-yard was no market for breeding animals. The men to sell

that kind of stock to were the men who want them for breeding purposes. We suggested a small advertisement in the Dairyman, but when we told him it would cost him $5, he took fright at once. He could not look beyond that $5. Finally we coaxed him to try it, and he received a bushel of letters, finally selling the bull for $70, and had to send back several drafts to those who were too late with their money. He made $25 by the investment, or 500 percent. Last autumn we had 460 bushels of fine two-rowed Bavarian barley to sell. All the buyers in this vicinity would pay was 55 cents. A small advertisement in the Dairyman has sold 430 bushels at $1.25 per bushel. A few years ago we persuaded three farmers near this city, who had each a half-dozen or so nice Jersey and Guernsey heifer calves, to advertise them. Answers came from a dozen States, and they all went in a bunch to a purchaser in Idaho. Farmers do not often enough try to co-operate in this way. Somebody must come along and urge them into it. Good profit can often be made on products of the farm, like seed-grain, dairy cattle, well-bred pigs and fowls, by advertising them in a good farm paper, and especially in the local paper. The paper is a go-between that should be used more than it is. Farmers should use good business judgment as well as merchants and manufacturers. It is more than half the battle to be a good seller.

Most bee-keepers are farmers. Undoubtedly they have many things that they could sell to other farmer bee-keepers, aside from their honey, bees, or beeswax. We have found that bee-keepers are so constituted that they prefer to patronize each other whenever they can do so. In view of this fact, no doubt many bee-keepers would find it to their decided advantage to advertise in the bee-papers. The illustrations contained in the foregoing paragraph are very plain. They all show that it pays the farmers to advertise. It pays them well. It will pay readers of the American Bee Journal to advertise in it, we are very sure, if, of course, they have anything to dispose of. If Dr. Miller, for instance, had 50 or 100 bushels of excellent seed potatoes for sale, there is no doubt many of our readers who would be very glad to buy of him. Especially would this be the case if the buyers were not very far away from where Dr. Miller lives.

The principal things we have for sale at the present time are the American Bee Journal and bee-books. We are entirely out of the bee-supply business, so we do not expect to come into competition with our advertisers in that line as heretofore. The field is entirely clear to them so far as we are concerned. This being the case, we have no doubt that many of the smaller bee-supply dealers who have not been advertising in the Bee Journal will find that it will pay them to do so. Already a number of dealers have taken space in our columns who were not represented before, and also many of our former advertisers are using increased space. We believe they will all find that it will pay them thus to patronize the advertising columns of the American Bee Journal. *All* its readers are bee-keepers. They subscribe for it because it pays them to do so. It is *all bees*. No side-issues appear in its columns. It is issued weekly, and comes regularly, not having been even late except once in 20 years. Its advertisers are clean, honorable people. They are all out for a square deal. They have goods for sale that readers of the American Bee Journal require. And many of our readers have things for sale that other readers no doubt would be glad to buy. Why not exchange, and thus each be a benefit to the other?

We trust those who are intersted will read again the paragraph that we have copied at the beginning of this editorial, and will act upon the suggestions there offered. It will be a help all around—the advertisers will be helped, the purchasers will be helped, and the old American Bee Journal will be helped. Why not let the latter introduce the other two to each other through an advertisement? Our advertising rates will be furnished on application to this office.

Some Expert Opinion

"In the multitude of counsellors there is safety."—Bible.

Free-Hanging Frames.

If for some reason you were to start in anew to keep bees, and were obliged to get an entirely new outfit—

Ques. 7.—Would you use a free-hanging frame? If so, why? If not, why?

N. E. France (Wis.)—Yes. Easiest to handle.

L. Stachelhausen (Tex.)—Yes! (See Ques. 8.)

S. T. Pettit (Ont.)—Yes, with staple-spacers. More convenient.

Geo. W. Brodbeck (Calif.)—Yes. Less trouble in handling, and no restriction in spacing.

G. M Doolittle (N. Y.)—Yes. Because, all things taken into consideration, it proves best in my hands.

E. E. Hasty (Ohio)—Yes. So handy. But if I worked on migratory plans I should want something less free.

Mrs. L. Harrison (Ill.)—Our Langstroth frame fits into notches at the top of the hive, and are all equally spaced.

P. H. Elwood (N. Y.)—No, not so good to move. We move our bees out in the spring, and back again in the fall.

R. L. Taylor (Mich.)—No. Because I don't like a rattle-box for a hive; and because there is waste space outside the end-bars.

E. S. Lovesy (Utah)—Yes, because they are easy to manipulate, and if they are self-spacing, with care there is no need of killing the bees.

J. M. Hambaugh (Calif.)—Yes, and a plain one at that. No Hoffman self-spacing, for they are an absolute detriment to easy and rapid manipulation.

Eugene Secor (Iowa)—A hanging, self-spacing frame. They are easily moved, but more perfectly spaced than one is likely to leave them if one trusts his eye.

C. Davenport (Minn.)—No. It takes too much time and work to space them correctly, and if you wish to move a hive they have to be fastened in place some way.

Prof. A. J. Cook (Calif.)—I should. It is more easy to manipulate, is less likely to kill bees, and is simple. Simplicity is a good motto in hive-construction.

Jas. A. Stone (Ill.)—If you mean free of spacers, my answer is yes. Because the greatest obstruction to returning a frame was the spacer. Have torn mine all out.

C. P. Dadant (Ill.)—Yes, by all means; because it is the safest for the bees, and the easiest to handle. I would not use spacers except such as were a part of the hive-body, and not of the frames.

J. A. Green (Colo.)—No. Because I want the frames properly spaced at all times, and a hive that can be handled any side up without coming to pieces, and that is ready for hauling at all times by simply closing it up.

E. Whitcomb (Nebr.)—Yes. I do not care to have the frames incumbered by anything. If hanging free they will hang plumb if the hive is set anywhere near level; the conditions inside will be good both for the occupants and the handler.

Wm. Rohrig (Ariz.)—I think not. I prefer the Hoffman self-spacing frame; it is just as easy to handle, more accurately spaced, and can be handled in pairs, if desired. In moving bees they are just the thing—always in place, no smashing bees, etc.

C. H. Dibbern (Ill.)—No, sir, too hard, and often impossible, to get them out of hives when old, and crowded with bees. No more hanging frames for me—need too much spacing, and it is so pleasant to find a hive you wish to open with the combs all in a bunch.

G. W. Demaree (Ky.)—Yes, all the time. Why? Because they can be manipulated much easier, more rapidly, and are not half as trying to the bad temper of the apiarist as is the "bee-glued," "bee-stucktast," "chock-up" "fixed" frame. Why? That's all.

Dr. C. C. Miller (Ill.)—No. I don't want to have to spend time to try to get frames at something like equal distances apart. I don't want to have bottom-bars at all sorts of distances. I want hives ready to haul at a minute's notice without having to fasten the frames.

Adrian Getaz (Tenn.)—Yes. In order to spread them a little when taking out the first frame, and also to set them so as to admit, when necessary, some queen-cages between the frames. For the same reasons I want them spread not less than 1½ inches apart from center to center.

Rev. M. Mahin (Ind.)—I greatly prefer a free-hanging frame. For me it is much more easily manipulated, and kills fewer bees. I have several times made fixed frames, but in every case I have discarded them, cutting out the combs and putting them into the loose-hanging frames.

O. O. Poppleton (Fla.)—No. I use close fitting top-bars, which gives me the advantages of self-spacing frames, honey-boards, freedom from burr-combs, all in one. I can manipulate them easier and more rapidly than I can loose-hanging frames. A minor advantage is the less danger of being stung.

Dr. J. P. H. Brown (Ga.)—I would use a free-hanging frame with the ends of top-bars close fitting. Such arrangement of top bar makes the frames self-spacing—they can more easily be handled, and if necessary shoved from one side of the brood-chamber to the other without lifting from the hive.

Mrs J. M. Null (Mo.)—I think I would probably, more from force of habit than for any other reason. Hard to get out of old ruts. I have had some trouble with self-spacers, in the way of disfiguring combs. I think the free-hanging frames can be the more rapidly manipulated. My colonies being wintered on the summer stands, are very seldom moved. The question would assume a different shape, or rather would have a different meaning, did I practice cellar-wintering, or migratory bee-keeping.

R. C. Aikin (Colo.)—If I used a deep frame I would hang it, but if a shallow one I would stand it. To get results one must manipulate, and a standing frame is not nearly so easy to manipulate as a hanger. For a deep self-spacer the Hoffman is probably as good as anything. I despise nails and such. I am about "on the fence" as to whether to use loose or self-spacers in the deep frame. The loose style will not hang true, and the Hoffman is harder to handle unless you keep them at it so they can not get burred and glued so they have to be broken to get the first one out. *But* I head off the trouble by using *two* dummies or followers with the Hoffman, one on either side. It is simply a nuisance, the way the factories send out hives, the 8's have too much room for the follower, and the 10's too little; Root would grunt and fume no little to get one of his flimsy followers out of a 10-frame hive after it has been there a year unmolested; and out, it would be only kindling. Use two dummies and 9 frames in the 10-frame hive.

Contributed Articles

No. 3.—Comb or Extracted Honey—Which?

BY C. P. DADANT.

I HOPE the reader may not become tired of my discussion of the above subject; I aim to give all the points in my thoughts in as few words as possible.

In my experience, the production of comb honey is more expensive than that of extracted honey, that is, there is more labor required for the same result. Probably many beginners will be astonished at this statement, for surely extracting is a work that is entirely avoided when producing comb honey. But if we are well fixed for either work, I believe that I can show clearly that there is economy of labor in extracting. When you produce comb honey you have a fresh lot of sections to prepare every season. They must be put together, the foundation must be inserted in them before the crop. They must be put on at the right time, neither too early nor too late, for the bees will soil them if they are put on too early, and they will swarm more than ever if they are put on too late.

In order to avoid what is called "travel-stains" on the honey—made by the bees traveling back and forth over the sealed sections—they must be removed as quickly as possible when fully sealed. The practical comb-honey producer watches his bees daily, and is ever ready to take off sections and put on more. He is tied down to his bees. With this care on his hands, it is almost impossible for one person to care for more than one or two apiaries, if they are large.

When the crop is over, the sections must be scraped, sorted or graded, and put away in shipping-cases.

As there is more swarming than with the production of extracted honey, there is more labor on that score and more watching necessary. With the production of extracted honey, after the first year or two, when you have fully supplied your bees with the needed extracting frames, you have those extracting frames and supers all ready, at the end of the season, for the next crop. At the beginning of the new crop, or a little before, you place the supers on the hives—one, two, three supers to the colony as the case may require. After that only an occasional visit is needed, until the crop is over, to add more supers if any of the hives get crowded. The crop over, you extract all at one time, and two or three days will suffice for an entire apiary of 100 colonies.

It is true that at this time you need help, but this help does not have to be skilled help, though persons who are accustomed to the work do better than novices. But we have never yet seen the hired man who could not do his share when extracting honey unless he was so afraid of the bees that one sting would drive him away. The lack of adequate help was one of the main reasons of our abandoning the production of comb honey. We had a thousand things to do at that time, and never could spare more than one man till the harvest is over. Too many irons in the fire! But by the help of a large stock of extracting combs, we have never needed to let the irons burn while attending to other things.

There is an additional work, however, in the production of the extracted honey, if one wishes to reach the top price, and that is, putting it up in small packages. Cans, jars, bottles, pails, and wooden or paper packages help the sale. But the price at which the honey sells when put up in these different retail packages is increased to such an extent that we may well spend our time in preparing it in this way. The intrinsic price of extracted honey is much less than that of comb honey, and that is one of the objections against its production, of which I will speak later. But when we put it up in these small packages we decrease this different in price, and that of course may be credited to the labor which has been employed in putting it up.

The time of honey-sales—October to January—is the least busy of the bee-keeper's year, and he is often glad to increase his income by preparing his crop for retail in this manner. We have never neglected this side of the business of honey-production, and if any of our readers has a surplus of extracted honey which gives him some concern for its disposal at renumerative prices, let him try our method of putting it up in small packages, and drumming it at home among his acquaintances and in the groceries of his neighborhood. Too many of our apiarists send their honey crops, whether large or small, to the great centers, where they glut the market and are afterwards redistributed among the very same consumers to whom these apiarists might have sold the product in the first place, with much better results.

Another objection which we have to comb-honey production, that does not apply to extracted honey, is the necessity of keeping many combs that are partly filled, from one season to another. In a location where good crops are the rule and poor crops the exception, these combs are always a small percentage of the entire amount. Usually the same sections do not stay over more than one season. But in a secondary location, such as we inhabit, it is sometimes necessary to keep your stock of unfinished combs and sections over two or three years. They then become so stale and shopworn that they are unfit to be used, and must be destroyed. This is an item we do not find in the production of extracted honey. If we put the supers on the hives and they are not filled, we remove them in the fall and put them away again, none the worse for wear, and a little more propolis on the joints. We have here more large cornfields, wheat and oatfields, and timothy meadows, than anything else. Large dairies, with their accompanying pastures full of white clover, are the exception. So seasons like the one just past are, with us, rare.

When we produced comb honey we found that we had often a large percent of our sections that were unsalable, owing to being too much soiled by long usage. The reader will understand that I insist on the greater need of being in a good location when we want to run for comb honey. California, Colorado, and some parts of the North, where both basswood and clover abound, are the Eldorado of the comb-honey producer. The Californian especially has either much honey or none, and his crop is always sure when he has plenty of rain. So he knows for certain whether to put out a large number of sections for the new crop.

Hancock Co., Ill.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Spring Feeding—Pollen Substitutes, Etc.

Our bees have wintered well; all seem strong, and there seems to be plenty of sealed stores.

1. How early would you begin to feed when the bees have sealed honey?

2. We read that rye-flour is the best substitute for pollen, but in case none can be had what would you feed? How would Graham or buckwheat flour do?

3. Does sugar syrup ever cause foul brood?

4. Does syrup become tin-poisoned when fed in tin pans? (MISS) ANN F. KELLY.

Hickory Co., Mo.

1. If the bees have plenty of honey it is a question whether it is advisable to feed at all; but if you do, don't begin before bees fly freely.

2. Graham will do, and probably buckwheat. We have had good success with corn and oats ground together.

3. No.

4. I think not.

* * *

The Primitive Hive vs. the Modern.

When seen at a little distance, or when viewed in a picture, an apiary looks alarmingly like a graveyard; especially is this the case when the apiary is situated among trees, reminding the observer of willows and yews. This resemblance, however, of a hive to a tombstone, seems to pertain only to the hive of modern style, and not to the old straw-skep. There is certainly nothing in the shape of the latter to suggest such a thought. Indeed, quite the opposite idea is conveyed, for if we recall the comparison expressed by Benjamin F. Taylor, our fancy will carry us to the poet's old-time garden, where were seen—

> "The hives of a fashion quaint, classic, and old,
> Where the bees went and came with their burdens of gold—
> 'Twas an African village of straw-woven cones
> Within humming-range of those myrtle-draped stones."

For practicability and convenience the hive of to-day is undoubtedly superior to the old straw-skep, but for gracefulness of shape and picturesque appearance the straw-skep alone possesses this charm. Likewise, a square frame-house lacks the picturesqueness of an Indian wigwam. How clumsy-looking the one—how graceful appearing the other! We can justly admire the utility of the modern hive, but its architecture fails to inspire us with esthetic thoughts. Alas! in this instance, we are as hopelessly destitute of poetical ideas as was that country maid whom Touchstone vainly wished that the gods had made poetical.

Dr. C. C. Miller says that "just so far as the bees themselves are concerned, the nearer a hive comes to the globular form the better it will suit them, and, in reference to this fact, further adds that "the old-fashioned straw-skep is no doubt a better dwelling-place for bees than any modern hive, but it would not suit the bee-keeper." Perhaps, too, the spherical form pleases the esthetic ideas of a bee, for surely this fairy-like little botanist, familiar with exquisite curves in flower and leaf, beholds beauty in the bending line of the old straw-hive. *Bien-entendu*—this must be true!

Although the straw-skep is discarded in the apiary of the model bee-keeper, yet its image will always be used as an emblem of industry. "A thing of beauty is a joy forever," therefore the eye loves to dwell upon the simple, graceful shape of the old straw-hive, whether we see it pictured on the covers or works pertaining to apiculture, on the Chart of Freemasonry, or on the State seal of Utah. Never, indeed, while the language of symbols is taught will this image, with its embodied lesson, "pass into nothingness."

As our spirit of romance is shocked whenever we think of an Indian living elsewhere than in a wigwam, so our spirit of poetry always associates the bee as an indweller of the old straw-hive. But notwithstanding the poetic side of the question, we are truly thankful for movable frames, supers and sections, and whether bees abide in modern hives, or in those woven of straw, they still sing the same old songs that once gladdened the heart of Pan—that same old happy hum which Harriet E. Prescott describes as "the murmuring expression of all pleasant things, the chord of sunshine, and perfume, and flowers."

Wayne Co., Ind. KATE V. AUSTIN.

I am told that in Germany to-day, many of the bee-keepers—even those that are up-to-date—use hives made of straw.

Mending Smoker-Bellows With Canvas—Transferring Bees.

1. Can a smoker-bellows be fixed with canvas instead of leather? If so, how?

2. Our spring is here, peach and plum trees are in bloom, and the bees are at work carrying in pollen and some honey. They are all healthy, and doing finely. I had to feed only two late swarms. We think some have too much honey, as they are lying out now. Is there any danger of swarming as early as this? If so, would you advise moving some honey?

3. We caught a fine swarm in a dry-goods box last year, and did not get it transferred; they nearly filled the box, by far too much to keep them there. Would you advise transferring them to a new hive?

We have a good location here for bees, and are anxious to learn all we can about them. My son takes the American Bee Journal, and we all read it as it is such a help. We are from the North; that is why we are taking the Journal. The people here are 100 years behind the times.

Lampasas Co., Tex. MRS. MELLIE LOWE.

1. I don't know, but I do not think it would work.

2. An occasional swarm comes off in fruit-bloom, but it is hardly advisable to do anything with the honey.

3. Yes, you can transfer any time after fruit-bloom begins, or you can wait until they swarm, and then transfer 21 days afterward.

Working Off Second-Grade Honey.

As we do not use an extractor, working only for comb honey, the past season being so wet and cold our honey was somewhat disappointing. The frost killed the maple bloom, and the cold rains seemed to affect the apple and basswood blossoms; all of the honey was dark, some very dark indeed. The raspberry was very good flavor, and sold readily, but we had quite a quantity we strained and used in candy and cake making, giving samples to our friends, and in this way have done a good deal of advertising, quite a number trying honey in their own baking. While we hope never to have such a season again, we know we can find market for all second grade. We have never had enough comb honey to supply customers.

We have kept bees three seasons. The highest price for comb honey has been 25 cents per Ideal section, and last season we sold for 15 and 17 cents.

Monroe Co., N. Y. SARAH B. BOWERMAN.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Feeding at the Rear of the Hive.

How would it do to take out a piece of the rear cleat of the bottom-board so as to use a 2-quart Boardman feeder at the rear of the hive, instead of at the entrance?

IDAHO.

ANSWER.—You would succeed very well by taking one or more frames of brood with adhering bees, thus forming a nucleus and giving a queen to each; but it will be hardly advisable to do this before about the time when swarms are likely to issue.

Some of your views as to bees are hardly according to the general belief, and it would be an excellent thing for you to get a bee-book in which to study up such things, after which your observations would have much more interest for you.

Increase—Transferring—Perhaps Disease—Hoffman Frames vs. Closed-End—Splints Instead of Wires.

1. I intend to increase my apiary by the nucleus plan. Now after I divide the frames of the old colony among the 3 hives, I do not wish to put back the old queen that I took from the old colony, but a pure Italian. How long after I take the nuclei from the old hive is it correct to introduce the new queen?

2. I have 2 colonies in hives which measure 11½x13½x 12 inches deep, but I wish to transfer them to Langstroth hives. How will I proceed to do it, as the frames of my hives will not fit Langstroth hives?

3. I had 12 colonies die this winter, and upon examining the comb of some I find small patches of dead brood. The cappings are a dark brown, and have a rough appearance, the dead brood is nearly dried up, but soft, and when punctured a kind of matter runs out. It also has a very offensive smell. Whatever you think it is, is it contagious?

4. What is your opinion regarding Hoffman frames as compared with the closed-end frames?

5. I notice something said about small sticks used in frames instead of wire. Are they as good? and which way should they run?

ONTARIO.

ANSWERS.—1. Take away the old queen two or three days before making your nuclei. That gives you queenless bees for your nuclei, and they are the best to stay where they are put. Then you can give the new queen at the same time you make the nuclei, preferably in a candied cage for the bees to liberate.

2. Your Langstroth frames are 8 inches or more deep inside, the exact depth depending upon thickness of top and

bottom bars. Fortunately your old frames are deeper than that, which makes your task easy. With a hot knife cut the comb out of the frame, and cut off from the bottom just enough to make a snug fit in the new frame. That leaves you a space of perhaps 3½ inches at one end, which space you will fill with the comb you cut off from the bottom, cutting it down to fit. The cells of this last piece will not hang in the same direction as they did before, but will work well enough.

3. Very likely there is nothing unusual about it. Still there is a possibility of disease, and under the circumstances it will be advisable for you to invest 25 cents in Dr. Howard's pamphlet, with which you can inform yourself better than would be possible in this department. When the bees get to flying daily, the trouble should cease, in which case you have nothing to fear from contagion, but if disease is there the trouble will continue.

4. The closed-end frames are warmer for the bees in winter, but more troublesome than the Hoffmans as to bee-glue and killing bees. If you are much troubled with bee-glue, you will likely vote either one a nuisance.

5. Splints about 1-16 square run up and down, and properly used, as described in "Forty Years Among the Bees," page 88, I very much prefer them to wiring. But you must remember that I may be prejudiced in favor of my own invention. Their special advantage is that they allow the foundation to fill the frame *entirely*, clear down to the bottom-bar—a thing you can not do with wiring.

My heart is warmed by your kind words in appreciation of this department, but I don't like your saying you'll not ask any more questions for a long time. People that ask intelligent questions not always answered in the bee-books are *always* welcome.

Bees Storing Honey in Glass Jars.

Have bees ever been induced to deposit comb honey, of their own free will, in glass honey-jars? If not, why not?

CALIFORNIA.

ANSWER.—Yes, indeed; lots of times.

Distance Below Brood-Frames—Clipping Queens.

1. What is the distance from the bottom of brood-frames to bottom-board?

2. Would you advise clipping a queen's wings? I am a tenderfoot in the bee-business, and read everything I can, but some say clip, and some say not, so I don't know which is right.

ILLINOIS.

ANSWERS.—1. I find it very desirable to have a space two inches deep at any time of the year when bees are not likely to build comb. Many are satisfied with half of that, but after trying it for years I wouldn't do with less. During harvest time a space from ½ to 1 inch is enough.

2. The tendency is probably more and more toward clipping. Try part each way, and see what you like best. I think you will find that the clipped queens give you the least trouble.

Building Comb—Other Questions.

1. Naturally speaking, do bees build as fast sidewise as downwards, providing their hive is a cube?

2. Mr. Delos Wood, on page 109, says: "It is a fact accepted by our best bee-keepers that the size of the cell controls the sex of the egg." That being the case, will a queen lay worker-eggs in drone-comb, no other being present? or, if you move a drone-larva to a worker-comb, what will it bring forth?

3. Do queens ever lay in old queen-cells, or in new ones just started by the bees?

4. Does artificial swarming (by the "shook" plan) give as good results in honey as to let them follow Nature's plan? If not, about what is the loss in honey?

5. Of course, we all know that bees will enter another hive and steal honey; but have you any knowledge of bees from a queenless colony stealing an egg or larva from another colony and rearing themselves a queen from it.

TEXAS.

ANSWERS.—1. If the hive be very large in proportion to the cluster of bees, the bees will probably build faster downward; if the bees fairly fill a cubical hive, the building will probably be about the same in both directions.

2. The unmodified statement that the size of the cell controls the sex of the egg is hardly a part of the Dzierzon theory, and certainly Dzierzon can not be quoted to prove that a queen never lays in a queen-cell. In the American Bee Journal for 1861—pardon me if I stop to say that I've read and re-read that volume more than any other volume of any bee-paper ever published—in that volume, page 5, are given the thirteen propositions of the Dzierzon theory. The second reads as follows:

"In the normal condition of a colony, the queen is the only perfect female present in the hive, and lays all the eggs found therein. These eggs are male and female. From the former proceed the drones; from the latter, if laid in wider, acorn-shaped, and vertically suspended, so-called royal cells, lavishly supplied with a peculiar pabulum or jelly, proceed the queens."

Dzierzon's saying, in the connection in which it is found, "if laid in .... royal cells," is proof that Dzierzon believes that the queen lays in queen-cells, and there is nothing in his theory antagonistic to that belief.

Replying to your question, I never knew of more than one case where the bees had nothing but drone-combs, and they swarmed out rather than to try to keep house with such furniture. But I have known more than one case in which workers were reared in drone-comb. I *think* that in every such case the bees thicken the outward extremity of the cell wall so as to make the diameter at the mouth the same as the diameter of a worker-cell.

3. Probably in new ones, usually, although I see no reason why an old one might not be used.

4. Conditions vary, so that in some cases a shaken swarm may give more than a natural swarm, and in other cases less. Those who are successful with shaken swarms probably get more.

5. No.

Propolis—Pounds of Honey for a Pound of Beeswax—Cellar-Wintering.

1. What is propolis made of? (I call it bee-gum).

2. How much, or how many pounds, of honey does it take to make 1 pound of wax? I was taught about 7 pounds; now comes Mr. Dadant and says it takes 10 pounds.

3. Why should the thermometer not go lower than 40 degrees in a cellar?

Part of my bees are in an out-cellar, where there is no fire, and the thermometer stays at 30 or 32; the bees are all right yet. When could I put in a bucket of live coals?

J. B. M.

ANSWERS.—1. Gathered from the buds of trees. You will find it very abundant on Balm of Gilead and poplar.

2. I don't know. For a long time it was considered 20. Nowadays views vary greatly; some have it as low as 3, others 5, 7, up to 20. "You pays your money, you takes your choice."

3. In winter the bees keep the center of the cluster at about 50 degrees. The farther it goes down the more honey they must use to keep up the heat. Better not go below 45.

Shipping Bees on the Railroad.

Is it practicable to transport bees in colonies by the railroad cars, either as freight or by express, a distance of from 50 to 100 miles in the spring, say in the month of April? If so, what precautions should be observed to protect the honey from damage by bruising?

NORTH DAKOTA.

ANSWER.—Some railroads will not take less than a carload by freight. Expressage is very heavy, so that it might be cheaper to sell and buy again. Your railroad agent can tell you definitely about these things. If you have loose-hanging frames, unless they are fastened securely by propolis you must fasten them in place by laying a stick on top of the frames at each end and driving in nails, or by some other means. Fixed-distance or self-spacing frames need no fastening. Place the hive in the car with the frames running parallel with the railroad track, and fasten securely.

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

Convention Proceedings

CHICAGO-NORTHWESTERN.

Report of the Chicago-Northwestern Bee-Keepers' Convention, Held in Chicago, Dec. 2 and 3, 1903.

(Continued from page 149.)

LONG-TONGUED BEES AND THEIR WORK.

"Do the so-called long-tongued bees work to much extent on red clover?"

Dr. Miller—There is no question but that the hive-bee does sometimes work upon red clover. There is no question in my mind, and no question in your mind, that the red clover blossom is too deep for most bees to work upon, and there is no question in my mind but what a bee with an unusually long tongue has a better chance on those blossoms than one with a short tongue, so I believe that they do work to a considerable extent on it, and I believe that some of our bees, where we don't expect it, work on it. The question that is really down at the bottom of that is: Is it worth while for us to work for long-tongued bees, or pay any attention to that? Admitting all the value, I don't believe that it is worth while for me to pay any attention to which of my colonies have long tongues or short tongues. The thing I look for is which colony gives me the best crop of honey. When I do that, I am very likely getting the long tongues. I want the ones that get the honey. I think very likely you will get them when you do breed from your best colonies. I don't believe we need to talk much about it, but to breed from the colonies that will give us the most honey. Now allow me to defer from that point, and say that I believe that if you work—that if any man here who is six miles from me—works in his own apiary trying to improve his stock by breeding from his bees that give him the most honey he is helping me six miles away, and every one of us. You may say it is very small; but it is that much. It isn't that one man should work to improve his stock, but we all should. If you keep good stock and my bees meet your drones—although if you are six miles away that won't happen—but still, the thing is extending, and one of the things we need to do is to get bee-keepers at large to understand it is an important thing that each one should breed from his best stock.

Mr. Longsdon—My experience has been that my best yields has nearly always been from the hybrid bee. That would encourage breeding from mixed races of bees. I had some long-tongued bees and they weren't satisfactory to me. They are nice to handle, and I like them first-rate, and the red clover don't seem to worry them at all, but my best yield has nearly always been from colonies that have a little mixture from the black bee. I don't know whether to encourage breeding from a mixture or not.

Mr. Longsdon—I would like to hear from Mr. Muth on the long-tongued-bee business.

Mr. York—Do you want long-tongued bees, Mr. Muth?

Mr. Muth—My friend in the rear is afraid that I may stir up a hornets' nest. May I hear the question again?

Mr. York—Do the so-called long-tongued bees work to much extent on red clover?

Mr. Muth—I believe I spoke to a gentleman this morning at the breakfast table, who said he had had bees for many years, and I plead guilty of advertising the long-tongued red clover queens, and I will say for the others that I believe they are all quiet, because we *all* have red-clover workers, but they want the poor common workers to understand that they have bees with longer tongues. I believe they are stuffing something down us that is not so. I believe in calling things facts. When we have a customer come in and ask whether our bees' tongues are longer than any others, I will quote them just like this gentleman here. I believe you have hybrid bees, to tell you the truth, that produce as much honey as the bees from $2.50 queens.

Mr. York—Whose?

Mr. Muth—Those that are advertised. We sometimes pay $10 and $15. I paid $10 for one queen some three or four years ago. I wouldn't part with it for anything. It might be because I paid $10 for her, but there are others that are very fine, but long-tongued bees are one of the things—I believe when a man tells you his bees have longer tongues than anybody else's, I think that is a little bit too much. I don't believe it all. I have Carniolans, hybrids and blacks that I see produce just as much honey.

Rev. McCain—May I not ask if these tongues have not been measured? I have been reading some of the bee-books in the last two years, and I have seen some party giving the length. I must plead ignorance, but the book says they have been measured, and they gave a picture of the relative length of these tongues. I wanted to see if they actually measured these tongues with a micrometer.

Mr. York—I notice that Mr. McCain is asking us a question, and giving us a chance to answer. Most preachers don't give us a chance to answer!

Mr. Smith—If it is a good idea to breed for long tongues, why wouldn't it be a good idea to breed for short stingers? The argument holds just as good.

Mr. Abbott—Things are not always what they seem. That's the gist of it.

Mr. York—A stinger always is!

Mr. Moore—I believe Mr. Abbott is wrong on this idea of breeding out the stinging propensity. All right, do that if you please, and have all the neighbors' boys and town boys eat your honey. It is my idea not to breed the stingers out, but teach your bees to respect the members of the family and jab their stingers into the neighbors' boys and all who come to rob.

Mr. Muth—I measured lots of bees' tongues with a micrometer. You can take 10 bees out of a hive and there will not be two tongues alike. We have them all the way from 13, 17, to 20 one-hundredths, just according to how hard you press on their heads. You can make them any length you like. I have been in families where the husband and wife had a good many children, and there was a great big, long-armed fellow, the laziest man in the family; and there was a little bit of a runt, and a cripple may be, and he did all the work. So it is not always the long-tongued bee that does the most work. That's my *candid* opinion about the long-tongued bees. I am guilty of advertising long-tongued bees, because if I didn't do that I couldn't sell any queens!

Mr. York—That's his *candid* opinion; that's *granulated*, I suppose?

Dr. Miller—The tongues have been measured, and it is a fact, I have no doubt, as Mr. Muth says, that you can stretch, and you can measure, and you can do this unfairly, and there are scientific men, and they can be measured fairly, and there is a difference. As he suggests, there will be a difference in one hive. They will not be all exactly the same. Just as you see in a family there will be differences. You will find this, that one colony in the yard may have longer tongues than any other colony in the yard. Go back to what I said awhile ago, the nectar in the corolla of the clover blossom is difficult to reach on account of the shortness of the tongue, and as the longest pole brings the persimmons, so the longest tongue reaches the nectar, and if there was nothing else to judge by I would believe a good deal of that, and doing as some of the French do, and taking that colony which had the longest average length, and take that as the best colony. I believe it would be a good thing to do that, although I don't think it of much value, because we can do something better; we can measure the honey or crop we get. Those that give me the crop of honey are the ones I want. It might be of value to have the longest-tongued if we had nothing better to do than to measure the tongues, and taking the longest. We can do better than that. We can measure our crop of honey.

Mr. Moore—I have been waiting a number of years for this minute—to get Dr. Miller on the run. I have had my own suspicions. I spent $15 for a queen. There is Dr. Miller with all his 40 years' experience among the bees and he has never, as far as I know, said one word in print about long-tongued bees getting honey from red clover. I want to ask you a question: Do you, Dr. Miller, know personally of long-tongued bees gathering from red clover to any extent?

Dr. Miller—Mr. Moore doesn't read carefully all I write. He doesn't think it worth reading, or he would know that I have said in print what I have said here. I say, I don't know whether the long-tongued bees did more than any other. I do know that a long-tongued bee will do better than the short-tongued bee, and I don't need to see the colony do the work. Some things we can tell from common-sense without seeing. I know that I can from here reach that watch on the table.

Mr. York—But I don't want you to!

Dr. Miller—And I know that a man with an arm two feet longer can reach it easier. Have I seen him do it? I don't need to. I know he could do it.

Mr. Moore—It is kind of mean, but I want to crowd you squarely into a corner. You have long experience and you say to this convention that you do or do not know of a red clover field, whether your long-tongued bees did gather from that field or not?

Dr. Miller—I don't think that any of my bees have ever gotten a large amout of honey from red clover. They don't need to, the red and white clover being in blossom about the same time. I have seen them working on red clover, and have seen them without going more than two rods from my door, so I do know that they sometimes work on it, and at other times I have gone in a red clover field and I couldn't find a single bee. I don't think I have ever gotten very much honey from red clover, but I believe that I will get more if I have bees that can reach the nectar. In other words, I could get more honey, if they would try to get it, with long-tongued bees than with short-tongued. Now because some may have gone too far in this business don't settle down that there is no value in long-tongued bees. There is very decided, and positive, and great value in long tongues, and I believe the long tongue will go with other qualities. If there is any truth in the doctrine of scientists about these organs, then the effort to get that honey will lengthen that tongue, and the bee that is good in other respects will have that tongue. Don't understand me as under-rating because somebody has been advertising too much on it. There is value in the long-tongued bee. But we don't need that sort of a machine to measure the tongue, we can measure the crop, which is worth more.

Mr. Muth—We want bees with long tongues, but we want to know whether there is any truth in it. That is what I am trying to answer, and candidly. The act of Dr. Miller trying to stretch his arm out to reach that watch is something different from the corolla of red clover. Suppose, we will say, the nectar in the corolla it is not solid like the watch. The side walls of that little flower attract the moisture and a bee with a short tongue will not need to reach the nectar. It can catch ahold of the side-wall, and just sip up that nectar without touching it.

Dr. Miller—Do you tell us that a bee with a short tongue will reach all the nectar in the clover?

Mr. Muth—No; nearly all.

Dr. Miller—Do they do it?

Mr. Muth—I believe they do.

Dr. Miller—They don't in my locality!

Mr. Muth—They can suck it off on the side just like when you go to eat gravy. Let a piece of soft bread lie in the gravy; and it will take it all up; and that's the same way that the bee gets the nectar from the flower.

Mr. Abbott—The test of all teaches that bees do work on red clover sometimes. They do in Missouri, and I have invariably noticed that when we have a flow from red clover every colony in the apiary was working on the red clover. Something like four or five times have we had a good flow. I had Italians and hybrids and Carniolans. I was experimenting, and time after time when I found the bees in the field working I went to the hives to see if any special colony was carrying in pollen or honey, and I found them all working just the same, and when they were not all working there were not any working. The Italians sometimes get out earlier, and the general condition through the apiary was the same in every hive. It wasn't the long tongues. There was something else besides long tongues.

RECOGNITION OF THE SECRETARY'S SERVICES.

Mr. Horstmann—Before we start on more questions, there is one thing I would like to bring up, and I think it should be considered at this time. We have one member in this organization who has been very faithful to the organization, and we have never done anything to pay him for any trouble and work he has had, and I know he has had a great deal. I am speaking of our secretary. He has served ever since we organized. He has done a great many hours of extra work that some of us perhaps never think of, and I think this association can very well afford to pay him a little for his work. I move that we give him $25 for his past year's work.

Dr. Miller—Past year's work? It is for the past five years' work. I wouldn't say for the past year's work.

Mr. Horstmann—I wouldn't make an attempt to give him anything for the other years. Just make it for the past year. We will let the other years go. He has never said anything about it in any way. He would be satisfied if he didn't get anything, but I feel as though we should do somthing for him, for "The laborer is worthy of his hire," and I don't feel satisfied to have him work for nothing. I move that we pay him $25 for the past year.

Mr. York—I have been in the Association from the beginning, and I know that Mr. Moore has done the work for five years, and freely, gladly and willingly, and he has done everything to make this Association a success. I think we all have enjoyed the results of the labors he has given us. So much depends on the secretary. The amount of correspondence and mailing out of circulars, especially in the past year in connection with the foul brood law, has been a good deal. I am very glad this motion has been made.

The motion was put and carried unanimously.

CAUSE OF PICKLED BROOD.

"What is the cause of pickled brood?"

Pres. York—Mr. France ought to be able to help us out on that.

Mr. France—The cause of pickled brood? In short, I don't know, but certain conditions seem to produce it so that with a series of experience on those lines we can draw some conclusions as to what that might be. A shortage of proper food for the larval bee and a lack of proper temperature are the two main causes. Now to upset that, in one of the counties on the lake shore up here where every colony had pickled brood, it was as serious as if it had been foul brood. The colonies were reduced down badly. I fed every other colony, strengthened them and warmed the hives up by outside wrappings, and it disappeared in these and not in the others. The next year, in the same yard and in the same locality, I asked them, between the time of fruit-blossom and clover—there was about ten days' lapse of no honey-flow—that each day these bees be fed a little, so that they never knew the lapse between dandelion and clover bloom. It kept up good, and they had no pickled brood, but the others that were not treated did have. It was there at the time when we got the honey-flow. You must go back to the time when it began. Pickled brood, I don't believe, will ever lead to foul brood. Pickled brood will dry down in the cell and it will be lost. The bees will probably take care of it themselves.

Mr. Abbott—Where did that name "pickled brood" come from? They make pickles in Missouri with vinegar and salt. Why is it called pickled brood?

Mr. France—Dr. Howard gave it that name, as near as I know.

Mr. Abbott—Did he assign any reason?

Mr. France—No, there was somewhat of a sourness there, but we get that also in black brood.

Dr. Miller—There wasn't any black brood then, so that didn't count in the case, but there was the appearance of sourness, or being pickled.

Mr. Abbott—That's so. Dr. Miller would make an educator.

Pres. York—If. Mr. Abbott would read the American Bee Journal he would find out all about it!

Dr. Miller—He has.

Pres. York—Dr. Howard examined a certain sample of diseased brood, then wrote an article about it, and it was published in the American Bee Journal. Afterwards he had it printed to insert in his book on "Foul Brood." It was entitled "Pickled Brood and its Causes." Dr. Howard named the new disease "pickled brood."

Mr. Moore—I want to give Mr. France a chance to take something back. He was quoted in a late number of the American Bee Journal, in a foul brood article, I believe, as saying that pickled or foul brood may begin from a lack of prosperity in the colony, chilling, starvation, etc.

Mr. France—That foul brood might be produced by that?

Mr. Moore—Yes, sir.

Mr. France—If I said so I doubt whether I was understood by the reporter.

Mr. Johnson—I have the article here of the report and I wondered at it myself. It reads: "There may be lots of solid honey in the hive, but the brood may be starved or chilled, and these conditions may produce or cause the foul brood, or under these conditions pickled brood."

Mr. France—I remember saying that the conditions that would be produced by a larva in that condition would be a proper medium, and would advance the growth probably of foul brood.

Pres. York—That's it. It would develop there, but of course not unless the germs are there first.

Dr. Miller—I think Mr. France has very distinctly said that foul brood would not be started in any case without the germs.

Mr. Moore—Will Mr. France tell the convention how foul brood does start, how near to the source, or what is the source, if he has found it, or the original foul brood or any case of foul brood?

Mr. France—I have got after that as close as I can. I have gone back and read, two weeks ago, a German book on foul brood that is 123 years old. I confess I don't know what would originate foul brood. I can find where it was first imported to America, and from Canada to the United States, and from Italy to the United States, but what will originate a case of it I don't know.

A Member—It is like the smallpox. We know we have it, but we don't know where it originates.

Mr. France—Yes, you might say it is like smallpox. We know where probable conditions produce it. There is some in Canada where we can't account for it. One year an apiary was overflowed by the St. Lawrence River, and that drowned the brood; at least it appeared there, and it had never been in that place before.

Mr. Abbott—Might they not just as well ask you the question if you knew where any of the microscopic germs came from in the universe?

Dr. Miller—What good would it do if you did know?

Mr. France—In most of the cases, through his management, the bee-keeper has gotten it into his yard.

MOVING BEES IN HIVES WITH LOOSE FRAMES.

"What is the best method of preparing loose frames for moving?"

Mr. Abbott—Fasten them.

Pres. York—By what method?

Mr. Abbott—The easiest method for me is to take a hammer and some nails. I have moved many and shipped them half way across the continent.

Pres. York—That is the Missouri method.

Mr. Wilcox—There are a great many methods of fixing them. Let them alone six months before the time and they will fasten themselves by brace-combs, and if moved a short distance they won't require any additional fastening. In other cases I have found it very convenient to use end-bars of the brood-frames, Just as we have the material for making brood-frames, tack the ends and slip them down, and it just fits the space. They are all wedged up fast together, and when you are ready to open the hives just pull them out. It is easier done, and cheaper, and it is perfectly safe.

SHIPPING BEES BY LOCAL FREIGHT.

Mr. Abbott—While this question is up I want to touch on a thing right in that line. You know, Mr. York, that you and I went before the classification committee and got them to ship bees as local freight. I want to know if any of the bee-keepers have been taking advantage of that? Is it generally known? I went to ship six colonies into Central Kansas and the agent said, "You can't ship these less than carload lots." I said, "Yes, I can." He sent me to the foreman and he said: "You can't ship bees that way. You ought to know better than that." I said, "I ought to know better, and I think you ought to, but you don't seem to know. I was there when they admitted them into the classification, and I am right sure it has not been taken out." He said, "You can't ship them that way; you will have to take them back and ship by express." I insisted upon his looking it up, which he did, and he says, "Why, it is there." I said: "You might have known it, or I wouldn't have told you." He hadn't even noticed that. There hadn't been enough going on there. I wonder if the bee-keepers generally know that they can do that? They didn't down there. Those bees were in St. Joe hives, and all he did was to nail the cover on, and they went to Central Kansas perfectly safe. I think it cost the purchaser about $2 for freight, and the express charges would have been about $10.00. So you can see what Mr. York did!

Pres. York—How many have taken advantage of shipping bees by local freight?

Mr. Baldridge—Has it been printed, the classification that they could ship by freight? Has it been printed in the American Bee Journal?

Mr. Abbott—I think Mr. York printed it. The manufacturers got us to go. I wrote the G. B. Lewis Company, and I think it was printed in the American Bee Journal.

Mr. Hutchinson—Over how wide a scope of country does this classification extend?

Mr. Abbott—All over.

Mr. Hutchinson—Does that take in Michigan?

Mr. Abbott—Nothing east of Chicago.

Mr. Whitney—I shipped 22 colonies from Ohio to Illinois by the hundredweight. I didn't have a carload. I had about 2,500 pounds, and they occupied the whole car on the Baltimore & Ohio from Shelby County, Ohio, to Kankakee. I paid regular rates by the hundred. They didn't ask me to take a car.

Mr. Niver—In New Jersey, Delaware, New York, and Pennsylvania, all through there, they don't ask any questions. I have shipped at different times different quantities, and never a carload. There were no questions asked; they always went.

Mr. Abbott—The rate is double first-class.

MOVING BEES IN WINTER.

"Can bees be moved in winter successfully?"

Dr. Miller—Yes.

Mr. Thompson—The question came up last winter about a carload, and I am not quite certain but what some were being brought into Wisconsin in the winter, and the results were to be watched, and I would like to know if there is anything known of it now?

Mr. France—I think the party who came from Canada to Wisconsin moved in the winter, in December, when the thermometer was below zero, and he had a loss of two combs so far as the shipment of bees was concerned, but there were other things broken. He came to this country, and they held his bees for eight days in transit, and while on the way he caught a serious cold, and could get only as as far as Chicago. The bees were brought on to Wisconsin, unloaded, covered up with straw and hay, and he hurried on here and by the time he got back his 200 colonies of bees had gone down to 50. I had an opportunity to present the man with 60 colonies of bees by just going and getting them this season.

Mr. Wheeler—How was that?

Mr. France—He came from Ontario, Canada. The bees died from exposure after they were piled up. I knew of two yards, one of 60 and another one of 11, that were diseased, and the owners were disposed to burn up everything, and I had an opportunity to give this man the bees. I took them home, and out of the diseased hives, and put them in his healthy hives. The diseased material was left in the other yard.

Mr. Thompson—Would it be possible to move them? Under what conditions should the remainder of the winter be spent, and are they in any condition in the spring?

Mr. Wilcox—Do you mean in good condition instead of any condition?

Mr. Thompson—I mean in condition to work.

Mr. Abbott—A customer asked me about moving his bees. He was building a new house, and he asked me what I thought would be the best thing for him to do with his bees. I told him if they were my bees I would wait until it snowed, and I should put them on a sled quietly and set them off just as quiet, doing it myself, and then let them alone. I was just wondering if I gave him good advice.

Mr. Whitney—My first bees were two colonies in Ohio. I bought them and moved them five miles in zero weather on a sled. They came out all right in the spring. Of course, I handled them carefully.

Mr. Thompson—I was told by a prominent Wisconsin bee-keeper that he would move bees at any time during the winter, and put them in a cellar where the thermometer wasn't lower than 60 for ten days or two weeks, and he had no fear but what they would come out all right; that they would winter safely.

Mr. Longsdon—Mr. Thompson has told us how we may move bees without harm. Put them in a cellar or warm place until they get quiet and cluster. It is no trouble. But to rouse them up in cold weather you are simply destroying lots of them unnecesarily. Give them a warm place to recluster in.

Mr. Wheeler—Some 15 years ago I moved 24 colonies to Iowa on a freight train with a lot of stock and stuff. After I got there, they were unpacked and I piled them up and covered them with chaff and straw and let them stand there nearly a month before having a flight, and every colony lived and was strong and in good condition, and I was quite surprised myself that they came through. They weren't put in a cellar. The atmosphere was zero.

Mr. Hintz—I had a little experience in that thing that I will relate the results of next fall. I moved a lot yesterday on a common hay-rack, 14 colonies, and five in a little spring wagon, and they got roused up on the gravel road. They were three miles from home and I didn't have time to take off the stories. They got roused up, but after awhile they settled down, and I think they will winter just as well as any I moved some before in winter weather. They had a good lot of honey, and a good clustering place. They didn't get separated in the comb, but only pretty well stirred up, and there was a clustering place or super up above where they clustered between. There is no danger, and especially three or four weeks after, if they can have a good flight. I will report next fall at our meeting. I have 37 colonies to move, and every hive with honey. Both stories are full.

Mr. Wilcox—It would be well to offer a word of caution. One fall, the harvest over, the hives were turned over in the snow before carrying them into the cellar for winter, and they remained in that condition but a few days. How long I do not know, but when I went to carry them into the cellar I found the bees were all spotting their combs. I straightened them up and put them into hives as well as I could, with plenty of leaves, and carried them immediately into the cellar with others, and they were kept at a good and proper temperature all winter, and in the spring they were all dead, every one, while the other bees wintered well. This tends to show that those colonies were injured by being turned wrong side up into the snow but a few days before going into the cellar.

Mr. Hintz—Did they have fall or spring honey? If they have good fall honey it won't hurt them.

Mr. Wilcox—If you know that, I will take your word for it. I don't know it. I have always believed fall honey was as good as spring honey to winter bees. As to what they did have, they had the honey they reserved for themselves, and they got it themselves, whatever that may have been.

Mr. Wheeler—I am not anxious to talk, but I have had an experience. I have had mine hauled home and put in the cellar without a flight or anything, and I have had my bees in my home yard carried into another cellar, and I watched it very closely for I have heard a great deal about that, and I have found no difference in the way the bees winter. Those that were hauled home and put in at once and not given a flight wintered just as well as those that were set right in the yard.

Mr. Thompson—Did you ever take them out in the same manner from the out yard?

Mr. Wheeler—No, sir; I didn't do that.

PLACE OF THE NEXT NATIONAL MEETING.

Pres. York—How many prefer to have the next National Bee-keepers' Convention at St. Louis?

Dr. Miller—That question I see asked in the American Bee Journal by Pres. Harris.

After a long discussion, the result was as follows: St. Louis, 18; San Antonio, none; Cincinnati, 9; Salt Lake City, none; and Boston, 2.

SECOND DAY—AFTERNOON SESSION.

QUEEN-REARING—TRANSFERRING LARVÆ.

"What is the best method of transferring larvæ from worker-cells into queen-cells, and is royal jelly a necessity?

Dr. Miller—Royal jelly is not a necessity under the right way of manipulating, but I don't know what the best way of transferring larvæ is. The way that does for me is to take a piece of grass, timothy stick, something of that kind, and cut it into the form of a toothpick and dip under the larva in the worker-cell and put it in the queen-cell. That's all there is of that part of it. I don't know but what the queen-breeders use something better, but the grass is always at hand and I use that.

Mr. Starkey—I don't know what is best, but if I don't happen to have a spoon made for the purpose I take my knife and split off splinters of soft wood, and cut it with a toothpick point, and run through my fingers with the thumb-nail on the back, and by that pressure I make it cup. It is pliable, and when I push that down into the cell it will spring under the larva and dip up, and it will very easily slide off when I put it in the cup. The front part of the wood is cut flat and the back I cut three-cornered—a flat triangle, and by slipping it through my thumb it is made pliable.

Mr. Wheeler—I prefer to let the bees do it.

Mr. Duby—Is royal jelly a necessity? Some say it is not, some say it is. There are perhaps some parties here who have answers for this. Perhaps Mr. Stanley uses royal jelly when he transfers.

Mr. Stanley—Well, I don't know. I think it is. It is a great start anywhere. They accept the cells better with it, and there is nothing better than a toothpick to transfer the larva, or a quill will answer the purpose.

Dr. Miller—Can you get along without the royal jelly at all?

Mr. Stanley—Yes, sir; it can't be depended on, though. Some colonies might do very well, and others wouldn't. You might get along without it by putting the cells in first and then supplying them with the larvæ afterwards. By putting the cups in the queenless colony for some time they accept them better that way without the jelly.

BOTTOM STARTERS IN SECTIONS.

"Are bottom starters in sections necessary or desirable?"

Pres. York—I think they use them in Marengo. Now, Dr. Miller can't say "I don't know" to that.

Mr. Meredith—In two apiaries that contained over 50 colonies, each with and without the bottom starters, 200 sections were put on the market cased up, and I found that the ones having both top and bottom starters was honey that was more salable than that produced where they had only the top starter. I am very particular on account of the quality, and if the starters were not very well toward the bottom, many times the drone-comb would be there, and customers object to it.

Mr. Longsdon—Will Mr. Meredith please tell us a little bit about the heft and form of the comb-honey package that sells the best, that is, the most in demand, and that we can do the best with, if he will?

Pres. York—We will have that after the present question.

Dr. Miller—So far as I know, I was the first one who began the bottom-starter business, and I am at it yet. Pretty often you find me five years afterwards throwing away the things I have done before. There is this about a section being filled: It is very much as Mr. Meredith has stated. You are sure of having the sections built down to the bottom, and under certain circumstances without it you are pretty sure that it will not be built down to the bottom, and it will have a passage-way under. One of the things that results from the bottom starter, you will avoid what is sometimes done—the comb in the section will be bent off to one side and built up against the super, and I confess it was two or three years before I found why I had gotten rid of that. The bees would fill it in. If they had a heavy flow they wouldn't do that, but after a light flow the sections near the outside would be filled in. They work the most on the inside, and they would keep turning it over and get near the super. One of the first things that the bees do if you have a bottom starter, if you have a small starter—I have them less than a quarter of an inch between the two starters—and the first thing they do is to fasten the two together, and then cannot be shoved off to one side, so there is a somewhat important point about it there. The thing in a nutshell is, you have it filled up even; it isn't fuller at the bottom or fuller at the corners.

Mr. Highet—How deep is the bottom starter?

Dr. Miller—5/8 of an inch.

Mr. Kannenburg—Do the bees leave any passage-way where the starter is connected on either side, sometimes?

Dr. Miller—Yes, they may do that up at the top, up at the upper corner, but in many cases there is no passage-way whatever.

Mr. Kannenburg—They generally will have a passage-way somewhere, or they might leave it in the middle.

Dr. Miller—No, I never saw it. Often they leave no passage-way whatever.

Mr. Wheeler—I have a way that's a little different from some. I use a split section. I split a section right in two, and run the sheet of foundation right through the center of the section, so I have a starter on all four sides, and the center all filled up solid so the bees have no hole to get through, and build out from each side, and when they are finished I have a section all finished.

Dr. Miller—The whole section?

Mr. Wheeler—Yes, the whole section. I let down four halves of the section, then I lay on the sheet of foundation and lay on the other four halves, put in the super, and take another and do the same way. My sections are filled full.

Dr. Miller—Is there ever any sagging?

Mr. Wheeler—No, and I have never had one injured, They are always perfect, and they won't vary half an ounce in weight.

Dr. Miller—You would be in fashion in England.

Mr. Kannenburg—Don't that spoil the looks of the sections after they are filled? Looks kind of split off, and you can't finish it off.

Mr. Wheeler—That's against it. It leads to another point: People see the foundation, and they maybe think it is manufactured. That's the greatest objection.

Mr. Niver—How do you fasten those two halves of the section? Do you let the bees do that?

Mr. Wheeler—Clamp them together.

Dr. Miller—The foundation does it.

Mr. Niver—They will hold until you ship?

Mr. Wheeler—The bees do that. After they are in the hive 24 hours they will hold together perfectly.

Pres. York—It will do it all right. I have seen it many times.

Mr. Chapman—How do you split the sections?

Mr. Wheeler—The factory does that. I buy them that way.

ARE FULL-WEIGHT SECTIONS WANTED?

Mr. Longsdon—Do we want the sections full? I have seen advertised here in Chicago, "Honey wanted, but we don't want it to weigh over so many ounces." I would like to hear from some man who does know how full we want the sections filled.

Pres. York—Do we want full-weight sections?

Mr. Niver—I have quite a lot of experience right there, and it is my experience that the most popular weight to sell to the grocer is 12 ounces, and that would go in a section 3½x4¾x1½ inches. It weighs exactly 12 ounces full—fancy honey.

Pres. York—Now, Mr. Muth, I think you would better answer the question. Do you want "full" things down in Cincinnati, or not?

Mr. Muth—I have the honor to have a personal acquaintance and friendship with Frank Rauchfuss, and I think he is the best-posted honey-man in the world. I also had the pleasure of his company for about three days when he was in Cincinnati some two or three years ago, and a circular they issue on the grading of honey, and how they adopt their style meets my notion to the dot. They favor the 4¼x4¼x1⅞ section, open top and bottom, and 24 sections to the case—fancy, of course, is always the best. A 24-section case should weigh from 22 to 23 pounds, and no more than 24 pounds. We all go to the limit even if we do advertise long-tongued queens! The retail grocer or the general public is the one that we cater to. What we like may not be wanted by other people. If I want to buy a pound I want 16 ounces. When I sell a man a pound I sell him 16 ounces for a pound, and when I tell a man I will do it, I will do it. A retail grocer will often telephone me, "What have you got?" "I have something that will strike you." He wants a case of honey that has 24 sections and that weighs 22 pounds. If I tell him I have a case of 24 sections that weigh 25½ pounds he will say, "I don't want it." I have that demonstrated to me right along. A man in Iowa sent me about $275.00 worth. I had forgotten to mention when I told him to let his honey come that it must average less than a pound to a section, or it should not average more than 23 or 24 pounds to the case, but he let it come, and it all averages 25 and 26 pounds to the case. Well, there I am. I am looking for a buyer. I would like to sell it for what I paid for it. I believe they are all like that. I don't care; if a retail grocer wants light weight, give it to him; or if he wants pounds, give it to him. If he wants light weights, I have it; and if he wants pounds I have it; but the majority want to make a little money, and they don't make it anyway because they cut prices. They want to get the trade. If they are light weights, about 14 ounces, that strikes a man all right. They look like a pound and they can get 20 cents a piece.

Dr. Miller—Why do they make any more money on one than on the other?

Mr. Muth—Say I buy it by the pound, and I sell to the retail grocer by the pound, and they generally sell by the piece. There is more short-weight honey on the market than pounds, and whenever you have heavy-weight honey on the market you have a proposition. The gentleman that sold me this honey is a very fine one, but if I had known that the honey was heavy weight I wouldn't have wanted it for three cents a pound less than I paid for it, because it is a drug on the market.

Dr. Miller—If they all weigh alike, why is it that one will bring a better price than the other? If a section weighs 1½ pounds, wouldn't they be willing to pay for 1½ pounds?

Mr. Muth—No, sir. There are 24 sections in a case, and the case weighs 25½ pounds. The retail grocer will figure out each section will cost him say sixteen cents a pound; if under this weight you could sell for 18 cents a pound, and make about 40 cents on the case; but if he has to pay 18 cents a pound he will have to sell it for 20 cents, and a lady will come in and say, "You sell that frame of honey for 20 cents? I can get all I want for 18 cents." Yours might be so big, and the other so small, it is the same thing, I assure you. Life is too short to talk with people. Give to them just exactly what they want, and let them alone. [Applause.]

Dr. Miller—I would like to ask: These people that buy light-weight sections, do they think they are getting full-weight?

Mr. Muth—No, sir. We are not talking about weights at all. Now, mind you, I am no retailer. If I see a customer come up to buy a pound of honey I am astonished, because none come to me. I am a wholesaler. I am taking the position of the retailer, and I am catering to the retail grocery trade. That's what I suppose you want to know.

Dr. Miller—If I have a 24-section case that weighs 24 pounds can I get as much a pound for that as if it weighed 22 pounds to the case?

Mr. Muth—Yes, that will go all right.

Dr. Miller—Same thing?

Mr. Muth—This man who sent me the $275.00 worth of honey gets just as much from me, but I wish he had his honey and I had my money. How am I going to get rid of it? I have to stick it on to some fellow that doesn't know anything about it. I am selling by the weight. He is not going to make as much. Maybe I am a little bit too frank with you, gentlemen.

Pres. York—We are not used to it in Chicago! Look out for him!

Dr. Miller—Never mind him. I am from the country. I want to know about that case of honey, the one that's light weight. The light-weight section will bring just as much money as the section that weighs 17 ounces because the people think that they are all just alike!

Mr. Muth—That doesn't give the situation. Say a 24-section case of honey will weigh, 22 pounds. We will say at 15 cents a pound, that would make $3.30. Now divide that by 24—about 14 cents a piece. He will get 18 or 20 cents for it, and he is going to make a nice profit. But if his case of honey weighs 25 pounds, he has to pay me 15 cents a pound. A retail grocer is not a broad-gauged man, and competition drives him to see money, and he will hesitate a whole lot before he will take an over-weight case of honey when a short-weight case is presented to him, because it always sells by the section.

Dr. Miller—You get just as much for one section as for the other? If a grocer held up two sections before a woman and said, "There is one that weighs 14 or 15 ounces, and here is another that weighs a pound," would she give the same for one as for the other?

Mr. Muth—No.

Dr. Miller—You have to fool her?

Mr. Muth—No.

Mr. Wheeler—The grocery man don't handle both kinds, don't you know?

Mr. Muth—The dealer caters to the wants of the retail grocer, or to the demand.

Dr. Miller—The grocer wants a light-weight section. Now, does the woman want the light-weight section? And what is she going to get? Which do you say, does she or doesn't she?

Mr. Muth—You can go to any one of these grocers and ask them what kind of coffee they sell the most of. Do they sell the most Mocha and Java, or do they sell the most of Arbuckles?

Dr. Miller—Would you rather drink Mocha and Java?

Mr. Muth—They sell the kind they make the most on. We all like the best, but whether we will pay the price or not is another matter. The retail grocer is in business for profit, and we have to give him just exactly what he wants or he doesn't want it at all.

Dr. Miller—If the woman knows the truth about it?

Mr. Muth—She doesn't know it. They generally fool them.

Dr. Miller—The customers have to be fooled?

Mr. Muth—They get fooled quite often.

Mr. Wheeler—I think there is more to that than that alone. Leave the comb honey out of the question; take extracted honey. Pres. York and I have had a good deal to do with that. We find that a jar holding ¾ of a pound sells ten to one where the one-pound jars sells. The grocery man will make his profit out of one just as well as the other. People are looking for a cheaper package. They like to have something around 15 cents. As soon as it is 18 or 20, then they stop buying. The ¾ jar sells just as the 15-cent cake of honey does. It ranges between 15 and 18 cents a package. I have found that to be the fact ever since I commenced to sell honey. They want honey around 15 cents—the people that are consuming honey. There is a pound of honey, but the grocery man may stay there all day and they will buy the 15-cent jar of honey.

Mr. Niver—I have been a grocery man nine years of my life, I have sympathy for the grocer, I know why all these things are, and we don't get at the point. The grocery man hates to figure. He can convince his customer that he is honest. It isn't practical in a grocery store to weigh a section and get the different fractions and figure it up, so he guesses at it.

Dr. Miller—Anybody been asking about fractions?

Mr. Niver—Follow my argument. The honey-producers, in order to work off No. 2's and 3's will take a few very heavy sections and mix them with quite a number of light ones, and it all comes to 22 pounds, and it is a light-weight case, but they are not all alike. The customer comes in and the grocer says, "Take your choice at 15 cents," for instance, and the lady will pick out the best section, as you or I would, and as anybody else would, and the last six to eight are culls. He can't sell them at hardly any price. He doesn't want to handle honey after that. You give him 24 sections of honey that weigh exactly a pound apiece, every one, and he puts it there at 15 cents, the last will sell as well as the first one; but put another case right opposite which weighs ¾ of a pound each, and sell them at 12 cents, and the other at 15, the 12-cent will go first. That is human nature. We cater to that idea, and had all our sections to hold ¾ of a pound each, and they would retail at 15 cents in those days. The pound sections had to retail at 20, which was the same price per pound, yet it was almost impossible to sell the pound sections while it was easy to sell the others. Another class of trade, we sold No. 2's, 10 ounces each, and they sold two for a quarter, and they went more rapidly than fancy honey because the lady will buy two for a quarter rather than pay 15 cents each. It would go faster than the other for that reason. It is the culls on the last end that is the reason he wants honey all alike, and while he doesn't want a large, heavy case—.

Dr. Miller—How much would those culls weigh?

Mr. Niver—About 10 ounces. We sold by count always, and not figures. It is the most practical way, and it gets rid of this talk. Grade your honey correctly. Sell by count, and the grocery man is better satisfied, and it is easier work to sell it.

Dr. Miller—Suppose a section weighs 10 or 12 ounces?

Mr. Niver—I say that is No. 2

Dr. Miller—How would that sell?

Mr. Niver—Per pound the same as the other.

Dr. Miller—How to the customer?

Mr. Niver—Same price for it.

Dr. Miller—No trouble to sell it?

Mr. Niver—No, reasonably more popular honey.

Dr. Miller—How wouldn't it be profitable at the tail end?

Mr. Niver—Because he has to sell it for the same price as the good. Has to pack it good, and put it in the same case. They want to work off their No. steens; they will try to work them off with the good honey, and make the good honey sell the other, and then the grocery man "gets it where the baby wore the beads," when they sell it that way.

Dr. Miller—I notice by the report in the American Bee Journal that the heavy-weights bring about 2 to 3 cents a pound less than the others, and some people have hinted to me sometimes that that was because the grocers want to buy by weight and sell by the piece, with the inference to the customer that each one weighs about a pound, and I couldn't make myself believe that that was entirely honest. They were deceived about it, and they thought they were getting a pound in each section.

Mr. Wheeler—I have sold considerable honey in Chicago this year. They would ask, "How much do your sections weigh?" And I would tell them, 12 to 14 ounces. After that my end of the story is done. Whatever the grocer tells is nothing to me. I told him the truth, and I have no trouble in selling them.

Pres. York—I don't think the customers know very much about the pound section. They but it as a package.

Mr. Clarke—As to the public buying a box of honey—the general public at the stores where they don't believe and know—they suppose that they get a pound of honey.

Mr. Niver—A man's belief is of no consequence to anybody but himself, and what they believe is none of my business. If I say that piece of honey is worth 15 cents—I didn't tell him it was a pound, or two pounds. Why should he not believe it weighs two pounds? and the same argument was used when we came to one-pound sections. It is not a question of weight. This piece of honey is 15 cents, 18 cents, or 20 cents, as the case may be. Say 20 cents that section is worth. Well, if you want to for an experiment they will weigh it for you, but no grocer can afford to take the time to weigh it all. If you buy an orange, they say the orange is worth so much. Take it or leave it. There is no dishonesty, because there is no claim setting forth that they weigh a pound, or two pounds.

Mr. Clarke—Some of the strongest laws in existence are unwritten laws. I have had lots of experience. A lady sent to two different stores for a bushel of potatoes, 60 pounds. A section-box is supposed to weigh a pound, generally speaking. This lady got 13 pounds short-weight on the one bushel from the grocer who sold by measure, and the other grocer sent her 60 pounds for a bushel. What is the fact? Everybody says now, "B. will swindle you, and the other is honest and will give you what is perfectly right," and I think it holds good in honey as in any other goods. I never have a month go by but what I have somebody come in to buy honey, and I will say, "Well, that section won't average more than 14 or 15 ounces," and the customer says, "Why, I always supposed that was a pound." They are misjudging it because they are no judge.

Mr. Moore—I hate to add anything to this discussion. In my mind it runs back at least 10 years. Dr. Miller has written numerous articles in the bee-papers right along this direct question as to whether it was moral and right to sell pound sections in the way that they are sold in the trade. There is no use in our deceiving ourselves. Fight the devil with fire and tell the truth. There are no morals in business. Very little of it in Chicago business. I hate to say it, but the percentage of the people, take the retail grocery business, who allow their morals to interfere with their business over the counter, is very small in Chicago.

Dr. Miller—Go to Cincinnati for that!

Mr. Moore—It is my conviction, after 17 years of selling honey, and calling on hundreds of grocery stores, there is a dishonest motive back of buying honey by the pound and selling it by the piece. That's what Dr. Miller has always claimed. I don't claim so because he says so. I would rather be against him if my reason was so, for the sake of my own individuality. Let us not deceive ourselves. People don't know what these sections are called. Everybody, everywhere, knows that they are called a pound section. That is a pound section without any honey in it. You may put in one ounce, or 16 ounces, or 20 ounces, but the lady thinks of a pound when she asks for that. It is a pound section. The grocer has bought 12-ounce sections by the pound, and he sells them by the piece, with the implication that they are a pound, and he gets the pound price for it. Some of the grocers are a little "green," and they buy heavy-weights and sell them for 20 cents a pound. This man is a little bit smoother, and he buys the light-weight and he sells a section for 18 cents, and he makes more than the fellow does who sells them for 20 cents, and the thought came to me whether if we as bee-keepers had a duty in regard to selling light-weight sections to the grocers and giving them a chance to make a dishonest profit. Occasionally some of the grocers are ignorant. I went into a grocery store and I saw some 12-ounce sections. I said, "What did you pay for those?" "Why," he says, "I paid 12 cents a pound." I said, "No, you didn't, you paid 16." He wouldn't believe it. "You paid 12 cents a section for it, but the sections only weigh 12 ounces, and that's 16 cents a pound." The position that that grocer was in is the position of the average housekeeper who buys this 4¼ square section and thinks it is a pound. I don't know if there is any remedy, and I don't know if it is on our consciences. If we sell our honey honestly, and the grocer thinks he has to deceive his customers, I don't know whether that is our affair. I should like to hear this discussed, whether we should cater to this light-weight section trade which tends to dishonesty.

Pres. York—What does Mr. Moore mean by a dishonest profit? What would be a dishonest profit on a section of honey?

Mr. Moore—Any profit on anything is dishonest which is gotten under deception of the customer.

Mr. Starkey—There is one thing I think we don't all consider, and that is the fact that the more prudent housewife who hasn't an unlimited use of the bank account, or has trained herself to the point where she means to save every cent she can (and it is proper she should, because there are chances when she can), when they go to buy honey or any other thing when they find something for a cent cheaper they prefer to buy it. It isn't because this man has a 16-ounce section of honey that he prefers to sell it; he knows the customers are looking for something that costs less money, and they are willing to take a smaller package, or rather the bee-keepers are not supplying the demand for a small-priced article. Now, I know if you put up a 10-cent package of honey, that would be enough to put on the table, and they would sell a great deal of that where they wouldn't sell a 20-cent package; yet a honey-producer cannot afford to put it up that way. The honey-man cannot afford to supply the demand. It costs too much to put it up and handle it. The grocery man would rather make three cents on a 20-cent package than 2 cents on a 10-cent package.

A Member—That depends.

Mr. Starkey—I believe in this case it will apply. You will grant that you can sell twice as many.

A Member—No, we won't.

Mr. Starkey—There is a demand for something that is not supplied. The grocery-man is just about as honest as any other man. They are trying to deal squarely, but if they find that the customers won't buy 20-ounce sections they get something else The grocery man is not dishonest.

Mr. Horstmann—There is no need of anybody being dishonest in selling comb honey. Now, I sell both extracted and comb honey. People come to me and ask me the price of honey. I say, "I sell the extracted at 15 cents a pound, and the comb honey at 20 cents a section. I tell them they weigh almost a pound; some weigh a pound and some weigh a little less. We sell it by the section, we don't sell it by the pound; but if you want a full pound, I will sell you a full pound of extracted honey for a certain price and I sell honey in bulk." They bring the jar to buy it in. Anyone can come to me and buy honey, and if he wants a pound he won't get a light-weight section. If he wants the latter I let him have them, if I have them to dispose of. If they sell my honey to somebody else and sell 12 ounces for a pound it is their dishonesty, not mine. I am honest in my sales. I tell them just how much I think they weigh.

Dr. Miller—I am very glad to accept the fact, and I do believe it is a fact, that that argument that a lighter section will sell better is from the mere fact that it is a lighter section; and the one thing that proves it is, that when the change was made from the 2-pound to the 1-pound sections, there was no deception in the weight in either case. The 1-pound section would sell in the market for one cent a pound more, and the only reason was because it was a lighter section; and still with all that, when I tell you that a light-weight case of sections will sell for 2 cents a pound more than one weighing a pound each, I am afraid that is because the grocers expect to sell these with the unspoken understanding on the part of the customer that they are getting a pound section.

Mr. Muth—I don't believe, Dr. Miller, that I am doing something that is wrong. The retail grocers as a whole are honest, and very seldom do you see a sign "20 cents a pound," or "18 cents a pound," when you see section honey. You will find a little ticket on it—20, 18 or 16 cents a comb, but they want to buy by the pound and they want to buy light-weight sections. There is no deception. The only deception is when the bee-keepers stick the dealer on honey that weighs more than a pound! I am talking from the dealers' point of view, and right straight.

Mr. Niver—One point that has not been touched. A 2-pound piece of honey put on the table will go on and off a number of times, and the last few times it won't be eaten, and it is thrown away. It isn't so bad with the pound section, but a half-pound section will go every time, and they will buy two ½-pound sections where they will buy only 1-pound section, and they will buy it a great deal oftener. That was one reason why we went down to the ¾-pound section, which is as low as we could make profitably. If we could have made ½-pounds we would have done it, but you cannot afford to do that. We cut to ¾-pound, and they were very well satisfied. The 4¼x4¼x⅞ were almost unsalable.

GETTING UNIFORM-WEIGHT SECTIONS.

"How can you get sections all to weigh 12 ounces each?"

Mr. Moore—The gentleman here has explained.

Mr. Fairbanks—Speaking of pound sections, I have an uncle in New Hampshire who puts his honey up in half-pound packages, and he has no trouble disposing of them two for a quarter, or 12½ cents a piece.

Dr. Miller—What is the size of the section?

Mr. Fairbanks—I didn't pay much attention to that; he worked those altogether, and he said that a man could hardly sell a pound section there. It wouldn't sell nearly so rapidly. It is a great bother and lots of work. I helped him put some together, but I didn't pay much attention to it, as I thought it was too much trouble. I wished since, though, that I had. It is like picking hazel-nuts out of chaff; I didn't think I had any time for it. Let me say, that there wouldn't be any family that would have to put it on the table more than once, because it would be all eaten up.

Pres. York—The question is: "How can you get sections all to weigh 12 ounces each?"

A Member—Can't do it.

Mr. Meredith—Cut out a little piece of the honey!

Pres. York—We would better have the next number on the program now, by Mr. Morley Pettit, of Ontario, Canada. The secretary will read the paper first, and then if we have time we will go on with the questions.

Secretary Moore then read Mr. Pettit's paper, as follows:

ESTABLISHING AND MAINTAINING A PROFITABLE HOME MARKET FOR HONEY.

The matter of markets is one of the most important problems in connection with bee-keeping. It involves different factors, principally buyers, sellers, prices, expenses, and profits. Profits are determined by deducting from the selling price the cost plus the expense of selling. Do not forget the expense of selling. The ultimate buyer is the consumer, and the sellers are any or all of three: retailers, wholesalers, and producers.

The producer expects a price for his product which will pay interest on his investment in bees, fixtures, etc.; will pay running expenses of the business, and a good profit on the time and muscle and brain work which he may devote to it. The wholesaler and retailer must each also make a paying profit.

Like all other problems in connection with bee-keeping, that of establishing and maintaining a home market is a sub-section of the question supreme from a business standpoint—How to secure the best profits or the highest returns for the investment of money, time and brains. In the matter of selling his product, shall the bee-keeper become wholesaler, or retailer, or both, or neither? If he is neither, he may put his honey up in large packages and sell to a few firms, possibly only one. He has few packages to fill and handle, few sales to make and few shipments. This requires small expense of money and time, and time is money. Let me repeat, time is money! Always money to those who do not lack either health or ambition to attain the highest business success. To sell to the wholesaler direct, then, cuts down the expense account. It has this advantage: It also brings a low price because the other two sellers must have their respective margins. It sends more honey to the large cities and tends to reduce the retail price there. If it leaves a shortage at home there is a double loss. Does the advantage counterbalance the disadvantage? Every man must answer for himself.

If the producer becomes wholesaler he saves the latter's profit to himself, provided his reputation is good and he knows enough to ask the right price. He also keeps the honey nearer home, avoids the glut of large city markets, and saves freight-rates. On the other hand, more time must be spent in canvassing for sales, putting honey up in smaller packages, and collecting small accounts.

When the producer becomes retailer the price is again increased, and usually also the expense. The small producer may be fortunate enough to sell his entire crop at the house with little expense. Further sales must be made by a house-to-house canvass. This takes time and travelling expense, but honey is thus taken into houses where it might never be used, and the increased consumption and gain in price will probably pay for the extra expense. The farther one gets from home in retailing honey the greater the expense, until a point is reached where the expense eats up the profit and wholesaling must be resorted to. In this also a point is reached where it will pay to ship the balance to wholesale firms or commission men in the large cities. These are a few of the points to be considered in deciding how best to dispose of the honey.

The home market depends largely upon the bee-keeper himself. He must put up a uniformly good article at a uniform price. Supply honey in whatever form the trade demands, but use every effort to educate people to buy it in the cheapest form, that is, extracted honey granulated, in tin, wood or paper. Push the sale of large, cheap packages. Do not sell a pound bottle, hoping that the next order will be a 10-pound pail. Families will take a 5-pound pail every Saturday when, if shown a 2-pound package, they would probably cut down their weekly order to that. Last season a local dealer showed in his window a 60-pound cake of granulated white-clover honey, having removed the tin with a can-opener. The honey was cut in squares and sold by the pound, wrapped in paper like butter or cheese. This season he is selling granulated honey for me again, but it is in Aikin honey-bags. These prove a good seller where people have learned that the granulated form is the natural and most palatable condition of honey in cool weather. Every bee-keeper should be an educational institution disseminating knowledge in his neighborhood and beyond. He should teach the nature and habits of honey, and its value as both food and medicine. By all means strenuously strive to reduce the cost of production and marketing, and maintain the price.

I have omitted detailed instructions which may be found in text-books and bee-papers; but I would say to bee-keepers who personally meet the consumers of your honey: Struggle against this pernicious habit of reliquefying honey, and putting up in expensive bottles. Show them that granulated honey in its natural state, is attractive and palatable, and is more apt to be pure.

A point which I would like to bring up particularly for discussion is this question: How to meet the competition of small producers who do not know the value of their product nor their time. They think to gain advantage by cutting a cent or two from the price. Then we must either meet that, and the result is all lose a cent per pound, and *no more honey is sold*, or else let them have the retail trade and sell wholesale, when there is a general lowering of price. Of course, the remedy is local organization, which is slow and difficult, or a local "corner" which is expensive and well-nigh impossible.

To establish a home market is commendable, in that it promotes the universal distribution and consumption of honey. It is also expensive; but with the coöperation among honey-producers necessary to their highest success it will certainly pay.

MORLEY PETTIT.

Pres. York—The paper is now before you for discussion.

Mr. Abbott—We hear a good deal said about the middle man. This is an age in which they are trying to eliminate the fellow in the middle. All sorts of societies and organizations are trying to get rid of the middle man. He is a fellow who lives in the city, and pays big prices for help and rent, and sells goods on small margins. It just occurred to me that he was the man to encourage to get rid of having the market spoiled. Here is this fellow in every city who handles honey. The fellow who comes in and doesn't know the price, he hasn't the time, and if he had he hasn't the adaptability. This is an age of the divisibility of labor. In a watch factory one man makes one wheel, and another man makes another, and every man makes his wheel all right. There isn't a man that can make a whole watch, and they do that because they get better results that way; and so with the fellow selling. I am now handling comb honey, and I don't want to be in business for fun. A man came into my place along in the season and he says, "What's honey worth?" I said, "That depends on the character of it. I am not buying it, but it ought to bring a good price because there is a small crop, and if I had honey I would get a good price for it." He said, "I have been around the city retailing mine. I have got a wagon-load, and I have been retailing it at 25 cents—two pounds for 25 cents." I said, "My dear, sir, are you a candidate for the lunatic asylum? Are you giving away your labor like that? If you have the honey, and it is the kind you say, drop the whole business right down here and I will give you a check, and I will sell every bit, and I would just as soon have a little of your money as somebody else." He says, "If that's the case, I will take my honey home." He would better have sold it to me and let me made 2½ cents than to have peddled it around the city destroying the market for a lot of other people. Don't you think the middle man would have been an advantage? The producer could take his ready cash and go home. He seemed to be glad to go home, and not have to go to the trouble of peddling it, because he didn't like that kind of work. We make a mistake about these things. The man who sells honey, the man who starts from Cincinnati and rushes to Baltimore, and rushes to Florida, and down to St. Louis, and then to Chicago, if he is selling barrels of honey he is making a market for you and me, and we want to stop this talk about killing out the middle man. [Applause.]

Mr. Wilcox—I have been to this convention ever since it opened and I don't recall any talk about killing off the middle man.

Mr. Abbott—It wasn't this time.

Mr. Wilcox—I once belonged to the Farmers' Alliance, and we talked middle man there. I don't believe the bee-keepers of the country are trying to injure him. They are looking after the industry in general, and we all recognize the fact that all classes are necessary. It is impossible to kill off the middle man.

Pres. York—I think they would die awfully hard if you tried it.

Mr. Wilcox—I have seen men try awfully hard. You go to producers to buy their honey and they will say, "What do you make?" And you tell them you make half a cent a pound, or more, and they will say, "You can't have it;" and they send it to Chicago to the commission man and pay him 10 per cent. What I got up to say is, that we are not unfriendly to the middle man, and not unfriendly to the supply man, and not unfriendly to any class of dealers or producers, but we wish to promote the general welfare of all.

OBJECTIONS TO THE T SUPER.

"Are there any special objections to the T super? If so, what are they?"

Pres. York—Dr. Miller doesn't know any objections to it.

Dr. Miller—I do. It is in four pieces, and if you are not careful you will have those four pieces scattered around and step on one of the T tins and smash it, and if you don't handle them exactly right, and somebody doesn't know about handling it, the whole thing will fall out and smash your sections; and there may be others.

Pres. York—Why do you use it, then?

Dr. Miller—Because I don't know of anything else as good!

Mr. Wilcox—I have studied that from Dr. Miller's writings. I have made and used a good many of them, but I couldn't make others use them just as he did. In making mine I made the T support solid, fast to the super instead of loose, so it couldn't fall out. It requires accuracy of measurement, and accuracy in size of measurements, and to secure them I made the super myself, and I always buy my sections at the same factory where they are made at practically the same guage, then I can slip them in and they fit, and they always fit and remain.

Mr. Abbott—There won't anybody buy it down in my country.

A Member—I had three or four hundred, and I changed them over into the section-holders. I had a great many reasons why I didn't like them.

Pres. York—But you have forgotten all about the trouble.

Mr. Niver—I think we have about 500 of them there at home, and they are fine for kindling the fire under the steam.

Mr. Abbott—I didn't know tin would burn.

Pres. York—It does down in New York! It gets hot down there!

Dr. Miller—I want to mention just one thing in regard to Mr. Wilcox. If the T tins are fastened on (and there are others who do that), then there is not the objection to falling out. The only reason I like the support is because then I can take the whole thing out at one time, T tins and all, and there is a little advantage in that. One very serious objection to the T super is, a great many people don't know how to use them!

Pres. York—There is a book published on that subject!

Dr. Miller—Many.

HONEY CROP OF THE UNITED STATES FOR 1903.

"Is the general honey crop of the United States for 1903 above the average?"

Mr. France—Possibly I have had through the correspondence of the members of the National an opportunity to learn of that, and I will say it is below an average, take the United States as a whole.

Mr. Abbott—Right.

CLOSED-END FRAMES.

"What are the good points in a closed-end frame?"

Pres. York—How many use the closed-end frame, or have used them? [Eight.]

Mr. Wilcox—One good point is, the space would be properly spaced while the combs were being filled. After the combs are filled I don't care for them any more.

Mr. Abbott—They didn't have any good points is the reason I quit using them.

Dr. Miller—They are fixed distances, and they are warmer; but I wouldn't have them.

Mr. Wheeler—I wouldn't have anything else. That's just the difference.

Mr. Wilcox—You ought to know the good points.

Mr. Wheeler—When you want to shake bees out, stick the end of your hive against the ground and you don't knock your frames all out of true.

Dr. Miller—You are not talking about the closed-end. It may be closed-end and hanging too.

Mr. Wheeler—I am talking about the closed-end and hanging.

Mr. Muth—I suppose that is another one of the articles that was made for the wings of some of the people. Every man I sold those closed-end hives to has thrown them away. They don't like them. Too much paraphernalia connected with them. I tried them a couple of years and don't want them.

Mr. Wheeler—I am glad of it. I can produce honey and beat the other fellows because I have shorter cuts. We can produce honey cheaper with that hive than with any other.

REVERSIBLE FRAMES.

"What is to be gained by the use of reversible frames?"

Pres. York—How many use reversible frames, or have used them? [Seven.]

Mr. Baldridge—I have used them but don't use them now.

Mr. Wilcox—I have now perhaps several thousand of them in use. They are made of the pattern described by Mr. Heddon. They are reversible. I can't say that I would advise everybody to start with them, because it costs a little more to start with. If a comb breaks loose, or in handling falls to the bottom-bar, you can reverse it, and it will sit on its bottom again and the bees will build the spaces full. That's one of the advantages. Sometimes they do break that way. Another advantage, that wedge-shaped piece on each end extending below the center some two inches leaves the space between the end of the frame and the end of the hive tapering narrow at the top and wider at the bottom, and I find it as Mr. Heddon said, that the bees would never build brace-combs behind the lower end of the brood-frame while the top may come as close as a quarter of an inch. I think that is a little advantage in moving out on the hive. That is only, however, peculiar to the one form of reversible frame and not to the principle.

Mr. Wheeler—Do you mean to say that that is the Heddon reversible hive?

Mr. Wilcox—Heddon reversible frame; hanging Langstroth. Heddon was the inventor.

WHITENING COLORED HONEY-VINEGAR.

"How can you make colored honey-vinegar white?"

Mr. Muth—The only thing to make white honey-vinegar is to use white honey from the beginning.

Mr. Wheeler—Mr. Meredith has one way of making vinegar white. He puts horse-radish in it!

Mr. Meredith—The distilled vinegar is white vinegar, but in the process of manufacture it is all a wine color, and it is reduced to its whiteness by some process, and there might be somebody here who has had experience in making honey-vinegar. If so, I would like to know it.

Dr. Miller—Follow up what is in the British Bee Journal. They make dark honey white by means of electrical machines and using ozone? I should think that would be expensive, but they say it isn't. First, to make the dark honey light you put the lightning through your vinegar and make it white. I don't know anything about it in practice, but they say it is really an inexpensive process, but I very much doubt its being a success.

Mr. Muth—In the large pork-packing establishments they clarify lard. They use all kinds of refuse to make lard, and they have fullers' earth that they clarify with. They put it in the lard, and the darkness will all settle to the bottom. In all the big establishments they clarify their products, and make them white as snow.

Mr. Meredith—At Aurora a process is used to a large extent in packing-houses, where they use the refuse and the putting on of this earth, and putting it through a press, brings it back to the whiteness which it was before it became dirty. It is done by means of a hydraulic press—pressed through cotton with pressure of 250 to 500 pounds. It is simply a matter of cleaning out the refuse and bringing it back to its original color.

Mr. Chapman—The packing-houses don't care to get the fuller's earth out of the lard! I presume in this case we would like to get rid of the fuller's earth.

PRODUCER'S NAME AND ADDRESS ON HONEY.

"Is it advisable for producers of comb honey to put their name and address on each section when shipping to a city dealer?"

Mr. Meredith—Yes, and no. As a producer I sell honey and somewhat object to anybody—I would object to shipping my honey to anybody that refused to have my name on it. I ran short and my neighbor Jones had some. The people who are buying my honey want Meredith's honey, and I had to clean off Jones' name; where I hadn't done so, they wanted my name on the honey.

Mr. Wilcox—The reason for putting it on there is to advertise it. That is the only reason, and we all wish to advertise our honey. The buyer who gets it may wish it to sell, and may want his name on instead of yours, and he will have to cut yours off. I am selling extracted honey and I sometimes run out and have to buy. I buy the best I can. I don't like to buy the poorest. If the man I buy from, and I order him to ship to you, and he has his name on there, you will write right back to him for some more of just such honey, and I would lose a customer. I would rather do without the profit on that honey. I have lost a customer by allowing that man to stamp his name on the package. I would lose a great many sales rather than buy from a man who would stamp his packages.

Pres. York—He might have his name on the box.

Mr. Muth—I don't want anyone's honey with his name over the sections. I will do that myself. We work hard to get customers, and I am just as jealous of my business as I can be, and if I develop a trade I don't want you to come in and take my trade. I have spent a life-time for it. I don't want a producer's name on every section. They can put it on the end of the case if they want to, and if I see fit I can scratch it off. Nine times out of ten it comes off, but when the name is all over the sections I don't want it. A good many times I feel like saying, "The honey is here subject to your order."

Mr. Horstmann—I don't think it is right for bee-keepers to have their names on the sections. I don't think it is honest. If I sell a case of honey to a dealer, that honey belongs to that dealer, and I claim that my name has no right on the sections. If I am an honest bee-keeper, and want to be fair, I should leave my name off. I can stick half a dozen, or a dozen cards in the box, and if he wants to advertise me and my business he can do so; but I say, Keep your names off the sections when you sell to the trade. If I am selling honey to people in my own neighborhood, I would put my name on the sections, and also when people come to my house to buy honey. I should advertise my business as much as I can, but I have no right to advertise my business at the expense of somebody else.

Mr. Kannenburg—It seems like that is trying to kill off the middleman!

Mr. Meredith—I have sold to merchants who required that my name be put on.

Pres. York—They held you responsible for it then.

Mr. Abbott—This means a little more, too. I think sometimes the names ought to be cut off of the honey. I hate to buy a thing with the company's name stamped all over it. I have thought sometimes, as a dealer, that I would quit handling those grades of extractors—A. I. Root Company's and others—because the trade belongs to me; I have to put in my hard licks for it, and I think there is too much advantage taken of us fellows who handle supplies. When I began selling supplies in St. Jo, you couldn't have sold a wheelbarrow or the cheapest hive which was $2.75, and now I can sell four or five carloads, and I have done it all myself. I want an extractor, and here comes an extractor with A. I. Root all over it, and the minute the customer gets it he writes to A. I. Root to find out what I got it for.

Dr. Miller—This whole thing is simply a matter of contract, and there is no trouble about it at all. If I make a trade with a man, before the trade is completed we must both agree to it. If I want to sell some honey to a man, if he says he wants my name on it, and if he will pay me enough for putting it on, I will do so. If he doesn't want it on, I am willing to leave it off. There are cases like Mr. Meredith says, where men will want the name on, but the majority of cases don't want it, and if you don't want to sell to a man of that kind, don't sell to him. You are not obliged to. This thing of saying the middle man is dishonest because he scrapes the name off—you are off, decidedly. As to the matter of articles like extractors, etc., the man that puts his name on, put it there for the sake of advertising, and the man that buys it buys it with that understanding, and it is a fair thing. They don't always put it on. You will find that on some of these things the manufacturer's name is not on. You will find a Singer sewing machine having Montgomery Ward's name on it, or a Fairbanks' scale will have some prominent farmer's name on it. It is an understanding of bargain and sale. I wish we could get rid of the idea that there is any dishonesty going on. We will go through life happier if we believe that there are honest men—and outside of Cincinnati, too!

Mr. Meredith—In putting up horse-radish, according to law, I am compelled to label the contents of that jar.

Pres. York—You must mention the *contents* on the label, not your own name.

Mr. Meredith—If it is a combination of horse-radish and vinegar.

Dr. Miller—Are you compelled to put your own name on?

Mr. Meredith—I must put my own name on together with the contents of that bottle.

Mr. France—That part is simply to protect the public in view of the pure food law in case of adulteration, that the inspector may know where to go.

Mr. Baldridge—Wouldn't that apply, though, to section honey? To oblige them to stamp it?

Mr. Wilcox—If there is such a law in Illinois. There is not in Wisconsin, and I can't understand how they can enact such a law. It certainly must apply to food products.

Pres. York—Comb honey isn't a manufactured article.

Mr. Wilcox—There might be a statute applying to manufactured food products.

WHY USE 8-FRAME HIVES.

"Will Dr. Miller please tell us why he uses 8-frame hives?"

Dr. Miller—As nearly as I can tell the principal reason is because I have them. One great reason, a very strong reason with me—it wouldn't be a strong reason with everybody—but if you were an old man as I am expecting to be within the next fifty years, and you had no help except a weak woman, you would want things as light as possible. That is a strong reason in favor of that hive; it is light to handle. Another reason is, I think, I can get more comb honey with the 8-frame hives than with the larger size.

HOW TO SUCCEED IN THE BEE-BUSINESS.

"How can I succeed in the bee-business? To be answered by Dr. Miller."

Pres. York—You could probably answer it better if you knew who it was, Doctor.

Dr. Miller—If the questioner will raise his hand I will look him over and tell him.

Mr. Longsdon—I didn't ask it, but I want to raise my hand.

Dr. Miller—You get a bee-book, and read that carefully, and study it through, and learn all you can from it, and then get another bee-book, until you get several. But, of course, above all get "Forty Years Among the Bees!" It is one of the best books in the world! Then get a bee-paper, and some of the best bee-papers of the world are published in the United States; and don't take foreign journals. Then attend conventions, and then go home and work it all out. Try carefully, watch your mistakes, and talk it over with your wife!

Mr. Johnson—And get some bees!

Dr. Miller—Oh, yes, get some bees. And when you have gone that far you will see through for yourself; and if you don't, call on me and I will tell you the rest!

Mr. Wheeler—Mr. Muth would say, "Get a long-tongued queen!"

LICENSE FOR SELLING HONEY.

"If I sell all my honey, and buy more to sell, am I compelled to get a license?"

Mr. Abbott—If he lived in Missouri he would have to get a license.

Mr. Moore—That's a question that perhaps I can answer. It depends largely upon the laws of the municipality, or town, or city. I believe 12 or 13 years ago they made me pay a license in Ft. Wayne. The general rule is that taking orders and delivering afterwards puts you in the class of commercial travelers. The only question would be in some town or city where it was the rule. It is a question to look up in your locality what the law is. If you don't peddle there is no license required, in general.

BEE-KEEPING IN ILLINOIS AND INDIANA.

"Does it pay to keep bees in Illinois or Indiana?"

Dr. Miller—Illinois, I think. Is the question which of the two States?

Pres. York—It means the two States.

Mr. Abbott—Anybody knows it pays in Illinois. Look at this crowd and the clothes they have on!

Mr. Duff—I don't think there would be many that would have very much clothing on if they depended on bee-culture!

Dr. Miller—I believe the question is entitled to a fair and honest answer. Take simply the matter of the profits from bee-culture alone, and I believe there are very few men that would make it a paying business. I believe a few who have a special aptitude might, but if a young man came to me in regard to his choice of a business for making money, I believe 19 out of 20, if not 99 out of 100, can make more money out of any other business.

Mr. Londgsdon—Then you were making a fool of me a little bit ago?

Dr. Miller—No, I wouldn't of *you*. Did you ever go fishing?

A Member—Yes.

Dr. Miller—Did you make a success of it? I caught three fish. I counted it a big success, but I didn't make any money at it.

Mr. Londgsdon—You mean a financial success?

Dr. Miller—In the bee-keeping business a lot of success comes just from the fun you have in it. There is hard work, and a lot of enjoyment. I don't know of any other business that you will have as much enjoyment studying out problems. You have gone to bed studying out problems, and when you are gray-headed you will still be studying out problems that way. It is a paying business in that way. It is an enjoyable business. I will give you one reason why I count it a profitable business, even if you have to have something else to go along with it to make your living: There are a great many men, thousands of men in this city to-day, men who have a great deal of wealth, and are working hard, and they are counting on the day when they will be able to lay business aside and go into the country and enjoy life; and nearly every one is looking forward to the time when he can take things easy. I am going fishing every day. I am having fun every day at bee-keeping. I am having a good time as I go along, and that's one of the reasons I can keep on at the bee-keeping and make less money because I don't need to look forward to the good time by and by. I am having my good time right now. Again, a man could do it in Illinois or Indiana with no other object in view except making money Then I say it is doubtful if he can count it a very profitable business in either of these two States.

MAKING AND SELLING HONEY-VINEGAR.

Pres. York—Some want to hear from Mr. Muth on the manufacture and sale of honey-vinegar. How is it done? And is it profitable?

Dr. Miller—Give us the last answer first and then maybe we won't care to hear the rest.

Mr. Muth—It pays if we can develop the trade, just like developing a home-trade for your honey. I made four or five barrels of honey-vinegar two or three years ago. I told my good wife, "Well, this is pin money for you, and if anybody wants honey-vinegar you can sell it to them at 40 cents a gallon." The first barrel we gave away to the neighbors. I told my wife to talk about it. We gave away a barrel of honey-vinegar, the finest in the world. I never had anything like it. Well, I believe some of the neighbors came in for two cents' worth. But I would rather let somebody else develop that trade. Years ago my good father made lots of honey-vinegar. I recall on Freeman street. our lot ran down about 140 feet on one street and about 50 or 60 on another. We occupied a corner lot. Early in the spring we put out barrels and barrels of honey-water for vinegar, and by August we had the finest vinegar you ever tasted. In those days we had a retail grocery, and the people were coming and going, and we gave them a sample of honey-vinegar once in a while, and thereby developed a wonderful trade in that line, and it created a trade that took it all for 40 or 35 cents a gallon; and it also created a trade among the rich nabobs on the hills at 35 cents a gallon. It can be done if you have the people coming in. I have no retail store. I am a wholesame man, and people don't come to my store. It can be made, and if I had a little retail store, and had bees where I lived, that would be one of my hobbies. I would knock out a profitable time having fun making honey-vinegar and selling it at 40 cents a gallon.

Mr. Wilcox—How much did you put in?

Mr. Muth—The more honey the better. Put 3 pounds of honey to a gallon of water; or if you put in 2 pounds you will get good vinegar. If you put in 4 pounds you would get the finest on earth; but I would call it about 15 or 20 cents a gallon cost.

Mr. Wheeler—Did it ever get too sweet?

Mr. Muth—No, the sweeter you get it the sourer it will get.

Mr. Wheeler—I have had it stand around in barrels and not ferment.

Mr. Muth—If you would make your honey-water real sweet, put in a little cake of yeast and it will ferment.

Mr. France—If you make it so very sweet it will ferment quicker, and be stronger, and it will eat your pickles. The housewife prefers vinegar that is not so strong.

Mr. Muth—I agree with you. Take about 3 pounds to a gallon, and that's a whole lot.

Mr. Wheeler—Did you ever try it after your honey was heated to the boiling point?

Mr. Muth—I did not.

Mr. Wheeler—I have had honey, the melting from cappings, the honey gets hot. I have had a great deal that was unfit to sell—water and honey that ran out of the wax-extractor. I have tried all sorts of ways to get that to sour, except by adding the yeast. I have put in the "mother of vinegar" even.

Mr. Muth—That ought to work. In the first place, have a vinegar-barrel or a wine-barrel, a barrel that fermentation has gone through. A whisky barrel won't do so well. It should be a vinegar or wine barrel. Bore two holes at the top of the ends. I take a piece of tin for each hole, and punch holes in the tin. Lay that aside until you put the honey-water in. After that is in, put it in a place where it can stand from spring until summer. Then put the honey-water in, and nail on the tins, rough edge up. The reason of that is to keep the little gnats and such things from getting into the barrel. That's all there is to be done. Use rain-water; no well-water.

Mr. Arndt—How does he clarify the vinegar? I have three or four barrels, and it is not quite in condition to market, and I have more orders than I can fill. The reason is that my vinegar is not quite sour enough yet, and I have sold out all that was marketable, and there is a demand. I can sell any quantity of vinegar in Chicago. I could go out to every customer and sell 500 gallons of vinegar in two or three months, but it costs so much to put it in jugs and ship. It is the cost of marketing.

Dr. Miller—How much a gallon?

Mr. Arndt—50 cents, including the jug.

Mr. Meredith—The clarifying of vinegar is done by packing a barrel with beech-shavings procured from a vinegar manufacturing company of this city. In connection with their works they have what they call the roller system of the manufacturing of vinegar—the roller presses, where the particles of vinegar or sweetened water come in contact with the air most often. I have also made a German vinegar still, where the air circulates from the bottom, and circulates through as the particles of sweetened water are dropping down, and then a pump brings it to the top, so that I have produced good vinegar from sweetened water in eight days. I think the quick process of making vinegar would be quite a help if they want to get into the detail of manufacturing vinegar in a small way. Take a barrel that will hold 165 gallons of liquid. Pack the shavings. Arrange the air-vent and the means of distributing the water through. Roll the barrel half over at different intervals, and it continually goes down through the shavings by what is called the quick process of manufacturing vinegar. Here the air goes through the barrel by allowing it to pass through.

Mr. Arndt—Is vinegar made that way just as good as that which takes two years to make?

Mr. Meredith—The manufacture of vinegar is the formation of acetic acid due to the changes that the vinegar comes to by the process of coming in contact with the air. Perhaps some others can give more information on that matter.

Mr. Arndt—My vinegar, although it is very sour, they can eat it by the spoonful and it never gags them.

Mr. York—It is very good vinegar, but most of the honey-vinegar is made in less time than two years.

Mr. Meredith—Vinegar can be bought in the Chicago market anywhere from 4 to 40 cents a gallon; and if they can manufacture good vinegar for that amount of money there must be some quick process.

Dr. Miller—Pres. York may be well enough satisfied with Mr. Arndt's vinegar, but Mr. Meredith has given the thing necessary—the exposure of the liquid to the air. When you have a barrel with a hole in it and perhaps a bottle in that hole, there is no chance for the air to get at any of that except the surface, and the air is coming in slowly; when it passes down through the shavings there is a very much larger surface. Take that barrel of sweetened water—liquid honey—and put in a small quantity. Put it in a shallow dish and that will sour very much quicker. The change will be much more rapid than if it were in a large body with only a small surface exposed. The shavings are the same thing. Every shaving is a surface when wet with that liquid. There would be, probably, in a barrel of shavings, I don't know how many square feet; the same amount would be exposed that there is in a great many barrels in the ordinary way, so that the chemical change can go on very rapidly, and that is all there is to it; and I don't see why the rapid change will be any detriment, and why it wouldn't make just as good vinegar one way as the other.

Mr. Abbott—The Doctor touched a good idea. If you will set out a small dish it will sour, and take that full of microbes and ready to go to work, and the barrel will sour quicker, too, and the microbes get to work. Get enough started and it will work.

Mr. Duff—And those microbes only get those conditions favorable to growth on account of the temperature. It must be 80 degrees, Fahrenheit.

Dr. Miller—You cannot sour ice.

Mr. Duff—You know that.

Mr. Meredith—A vinegar still, in a cheap form, consists of a barrel—you also need a faucet. Fill up one-third full with corn-cobs. Before that there is a hole bored so that the air will pass down, and the liquid from the top would pass down and up without going out. I made mine from shavings of basswood, and filled that up to the top. On top of that was set a tub that had a small hole bored through the bottom, with a string. That was the thing. In the center there is a two-inch tube so as to allow a passage of air to go down through these holes in the side of the barrel, and then up through this tube, and charging the still was done by saturating the entire corn-cobs and shavings with cheap vinegar.

Mr. Abbott—I suppose you all know that the cheapest vinegar is not made by fermentation. The white vinegar isn't vinegar really at all. It is made by a chemical process, and is far inferior to ordinary vinegar made in the family.

and it is a question whether it is injurious or not to the health. The general opinion, I believe, is that it is, but the manufacturers are forcing it on to you all the time. You can hardly get pure cider vinegar made by fermentation, and that's the advantage of honey-vinegar.

Mr. Johnson—The matter of fermentation is by ferments and germs, and it is the same way if you can a jar of fruit. If no air gets into the jar it is impossible, but as soon as a little air gets into the jar, fermentation takes place, because it is the same as the oxygen that gets into the barrel. The more surface you have the more microbes you get, and they could be at work on that and fermentation would take place much faster, and, besides, the degree of 98 Fahrenheit is the favorable degree for any kind of fermentation.

Mr. Meredith—I would like to say that the cheap vinegar, or white wine, as it is generally called, is given the name of distilled, and I also understand that the pure grades of malt vinegar are worth 40 cents, and they are also distilled, so that if they can manufacture one and both by the same process—fermentation—why can't they by some other means?

Mr. Wheeler—One word of warning to you people. I have used, I suppose, a barrel of honey trying to make vinegar, and I have taken the recipes I have read in the bee-papers for making that vinegar, and I have wasted my honey. If you want to try it, try it on a small scale, and find out what you can do.

Mr. Meredith—I accidentally made a gallon of vinegar superior to any I ever had, and I tried making a quantity and I couldn't get it as good. I sent it over to my brother-in-law and he thought it was very good sour wine.

Mrs. Stowe—Can you make vinegar with sour honey?

Dr. Miller—Sure; it is that much on the way.

Pres. York—I am sure this is the largest closing session of the Chicago Northwestern Bee-keepers' Association I have ever seen. I want to congratulate you on what I think has been a successful meeting. It has been on account of the interest you have taken in it, and the promptness with which you have taken up the questions. I thank you all for your courtesy in bearing with me as President. I have tried to do my best, and it seems that everything has worked so that we have had a grand time. I trust you all feel that way. We now stand adjourned until the call of the Executive Committee, probably in a year from now.

(The End.)

The Illinois State Bee-Keepers' Convention.

BY JAS. A. STONE, SEC.

(Continued from page 198.)

REPORT OF COMMITTEE ON RESOLUTIONS.

The chairman of the Committee on Resolutions reported the following resolutions:

WHEREAS, The Illinois State Bee-Keepers' Association was instrumental in securing a foul brood law for the benefit of the bee-keepers of the State at the last session of the General Assembly; and,

WHEREAS, Our sister associations, and especially the Chicago-Northwestern, were very helpful in obtaining the same; and,

WHEREAS, We believe that greater benefits will result to members of the different associations of the State by a union of the several societies; therefore, be it

Resolved, That members of other bee-keepers' organizations of the State be allowed membership in the State association, through their secretaries, upon payment of 25 cents per member.

The above was signed by the chairman of the committee, one member absent, and the third moved that it be laid over to the next annual meeting, which motion prevailed.

REPORT OF FOUL BROOD INSPECTOR.

Mr. Becker—We would like to hear a report from our foul brood inspector.

Mr. Smith—I traveled 3000 miles, and visited 30 apiaries. Bee-keepers in the north part of the State all have the large Danzenbaker hives; in the south part of the State they have old-fashioned hives, but they all take the American Bee Journal. In the north part they raise a great many cucumbers, lots of white and sweet clover, among the shaly hills. I ran across one man who had about 100 colonies of bees in cracker-boxes, and all kinds of traps for his bees. He had bees and honey enough to be worth at least $1000, and I venture he could not get $100 worth into shape for market. He had one barrel that had been used to pick chickens in. This man was in the central part of the State, and he did not take a bee-paper, nor could he be induced to join any association.

PROVIDING BEE-SUPPLIES A YEAR IN ADVANCE.

Mr. Becker—Is it best to provide a year beforehand for bee-supplies?

Mr. Baxter—It is not a wise plan to provide beforehand for your bees unless a prospect for honey offers. I will provide for next year, and make arrangements for a big honey crop, till I see white clover killed in the spring. I have never seen, till this year, the clover yield with a northwest, north, or northeast wind. This year the bees stored it with all kinds of winds.

TAKING OFF COMB HONEY.

Mr. Becker—When is the proper time to take off comb honey?

Mr. Crim—I take it off as soon as filled, and put it upstairs in a warm, dry room, tiered up.

Mr. Becker—That will do in this part of the country, but up on the Illinois River the moths seem to be in it when it is taken off.

REQUEENING COLONIES.

Mr. Miller—How shall we requeen our colonies?

Pres. Smith—When possible requeen from your own best queens. If you have none good enough be sure to send to some bee-keeper that is responsible. One year I had 30 queens from a queen-breeder, got foul brood, and others who had queens from the same place also got it.

J. Q. SMITH, President.

GETTING SWEET CLOVER SEED STARTED.

Mr. Dowdy—How is the best way to get sweet clover seed started?

Geo. Poindexter—The best way I have ever tried is to skim off the surface of the ground where sweet clover has seeded, and scatter it where you want it to grow. Any time in the fall of the year.

Secretary Stone made a statement of what Prof. Hopkins, of the Illinois University, said at the Sangamon County Farmers' Institute, in Mechanicsburg, in October last. He said: "Three-fourths of the air being nitrogen made 12 pounds of same to every square inch of the earth's surface. He told the boys if they would figure that up they would find the value of the nitrogen about one acre of ground to be a great many millions of dollars. As nitrogen is the principal element that enters into all the plant food, the great source of wealth is to find out the way to get this nitrogen out of the air into the soil. It has been discovered that leguminous plants have bacteria living on their roots that feed upon and bring the nitrogen from the air into the soil, so that plants can feed upon it. The clovers all have these bacteria on their roots, unless it be in soils that are too acid for them to thrive, in which case the clovers will not succeed. It has been discovered that *sweet clover always has abundance of these bacteria, and therefore is as great a fertilizer as we can get*, for the reason that it causes such great quantities of nitrogen to come into the soil, which accounts for its making such rapid growth in any kind of soil."

JAS. A. STONE, Secretary.

He added that, "where the bacteria is not in the soil, it must be sown, or alfalfa will not succeed."

DRONE FROM A LAYING WORKER.

Pres. Smith—Can a drone from a laying worker fertilize a queen?

No answer.

EIGHT FRAMES IN A 10-FRAME HIVE.

Secretary Stone—Is it better to put only 8 frames in a 10-frame hive for extracting? Will they be as evenly surfaced?

Mr. Becker—Yes.

No one else seemed to have tried it?

DRONE-TRAPS.

Mr. Crim—Is it best to use drone-traps?

Some said yes, and some had not tried them. One said, "Keep bantam chickens and they would eat the drones."

Secretary Stone—I never had as good success in Italianizing as when I used drone-traps.

FULL SHEETS IN SECTIONS.

Jas. Poindexter—What percent of gain is there in using full sheets of foundation?

Mr. Black—I put into some hives about one-half of each, and they were all filled about the same time.

Secretary Stone—I once sold some section honey to a grocer, who said, "I don't want any more of Mr. ——'s honey; it seemed to have a tough center, and some of my customers brought it back."

Adjourned to 10 o'clock the next day.

SECOND DAY.

The meeting was called to order at 10 o'clock a.m., Nov. 18, with Pres. Smith in the chair.

INTRODUCING QUEENS.

This question was again brought up and discussed as to best manner of introducing queens. It was agreed that in cases of the most difficult kind, when a laying worker is present, the safest way to proceed is to dump all the bees on the ground two or three feet from the hive, and in their mixed-up condition they seem to take up with their new queen.

GETTING BEES OUT OF SUPERS.

Mr. Crim—What is the best method for getting bees out of supers without the use of escapes?

Pres. Smith—I place the supers in a box, leave a small hole in the cover, and the bees come to the light and get out.

Secretary Stone—I tried this plan once and bees began to rob, so I made a box with a tight cover, in which I made two holes, and over them placed a cone of wire-cloth, and it worked all right.

GETTING RID OF ANTS.

Mr. Primm—How do you get rid of ants?

Pres. Smith—Sprinkle powdered borax, or gasoline, around where ants (or roaches) are.

Secretary Stone—I use crude carbolic acid, diluted 20 times.

KEEPING COMB HONEY FROM CANDYING.

Mr. Miller—How long can I keep my comb honey without candying?

Pres. Smith—Keep it in a warm room, and it will keep indefinitely.

All agreed.

On motion, adjourned until 1 o'clock.

Called to order at 1 p.m., pursuant to adjournment, with Pres. Smith in the chair.

On motion, proceeded to the election of officers.

On motion of Mr. Black, the Secretary was instructed to cast the ballot for J. Q. Smith for president for the ensuing year.

Proceeded to ballot for five vice-presidents with the following result:

First Vice-President, John S. Dowdy; 2d, J. W. Primm; 3d, Aaron Coppin; 4th, James Poindexter; 5th, S. N. Black.

Motion prevailed instructing the President to cast the ballot for Jas. A. Stone for secretary.

On motion, the Secretary was instructed to cast the ballot for Chas. Becker for treasurer.

Mr. Becker moved that a committee of three be appointed by the chairman to arrange a program for the next annual meeting. Motion prevailed.

The chair appointed the following committee: J. W. Primm, S. N. Black, and Aaron Coppin.

On motion of Mr. Black, the Executive Committee was given charge of the publishing of the report of our meetings of the Association.

Pres. Smith left, and Vice-Pres. Dowdy took the chair.

CHAS. BECKER, Treasurer.

Mr. Becker—I think we ought to have assistant foul brood inspectors in different parts of the State, so as to curtail the expense of railroad fare.

Mr. Primm moved that the Executive Committee be empowered to appoint assistant foul brood inspectors in the different divisions of the State.

Motion prevailed.

On motion, adjourned *sine die*.

JAS. A. STONE, *Sec.*

At the close of the meeting the Secretary forwarded all the names of the members to the National Bee-Keepers' Association, and they were duly acknowledged as members of the same. J. A. S.

Contributed Articles

No. 1.—FOUL BROOD.

Something About Its Development in the Colony, Its Management, and Methods of Treating It.

BY R. C. AIKIN.

THIS disease is one of the most dreaded in the list. That it is a bad one cannot be denied, but ignorance of its methods of growth and development, and the means of contagion by which it spreads, makes of it a much worse enemy than it should be. Having seen and handled much of it, I will give some of my observations and conclusions to aid and guard those who have not, so far, been hard up against the foul thing in their experience.

This disease cannot develop in any colony that does not have the contagion somehow placed in it, and it is simple foolishness to talk of foul brood coming from chilled brood, or any other kind of brood or disease; just as well expect to grow corn from wheat, or apples from potatoes, as to get foul brood from a dirty hive, old combs, lack of ventilation, or anything except the foul-brood seed planted in its medium of growth—and that medium is the body of a larval bee. I do not mean that it can not grow in something else besides a growing larva; our chemists grow it in the laboratory, but they plant in the medium or soil, *foul brood seed*.

Let the reader understand that I am not discussing this question as a scholar and learned scientist, but as one who has had to do with it in the apiary, battling with it at close range. When it comes to handling it in the laboratory, and cultivating it, studying it under a glass, and as our college professors and scientists do, I have no experience whatever; but I take their work and conclusions as to what the disease is, whether animal or vegetable growth, and its form and manner of reproducing, then continue its study under natural conditions, such as we are liable sooner or later to have to meet. Let me again affirm that this disease is a thing of itself, and does not come from nothing or from some other disease.

It is, according to our scientists, an animal growth. Its natural soil in which it thrives and grows is the body of a larval bee. I often describe it to bee-keepers as an infantile disease among bees, likening it to scarlet fever, diphtheria, croup, and such-like in the human family—diseases attacking the young, and, like them, must be planted in its kind to reproduce.

How, then, is a colony to become infected with foul brood? I firmly believe that only through the food can the disease be contracted, and have arrived at these conclusions from many evidences, and I will here give quite a list of them, all coming under my own observation, and also corroborated by many others' experience.

SOME FOUL BROOD OBSERVATIONS.

A colony foul to *very* foul, may stand side by side with a healthy one for two years; the one remains foul to extinction, and the other healthy all the time. A colony will have foul brood in a brood-nest to one side of the hive, and when the combs on that side become so foul that brood can scarcely be developed at all, will move to the other side of the brood-chamber and start a new brood-nest, and get a new lease of life that may prolong their existence from a few months to even a whole year. A diseased colony may have all combs removed and new frames put in the same hive, with starters, the colony proceeding to build comb and be and remain healthy from that time on. One comb in a colony may be fairly rotten with the disease, even to half the brood in it dead, while the comb next to it will scarcely have any dead in it. A two-story hive may have in one part a filthy, rotten mass so contaminated that if the colony were confined to that part would soon perish because of inability to mature brood, but by moving to the other chamber may get up a fairly strong colony, and even put up a good stock of surplus honey.

I expect many will think, and possibly say, that this is the worst kind of heresy; but they are facts nevertheless, and just what I have seen, and so have others. In this country, where bees and honey are made a special business by many, and not so much a small side-issue as with very many in the East, observations come to us in no mean proportion, sometimes. Those who are constantly in contact with large numbers of colonies day in and day out—and, we might say, year in and year out—get a much fuller and more conclusive observation than does the man with the few colonies and a host of other business. Nevertheless, some of the smaller bee-keepers with their few colonies and plenty of time to think and observe, may, and do, find out some of the things that we more extensive and busy men do not have time to get into; the lesser lights are not to hide their light, as they can give us facts that may be of much help to us to apply in a larger and extensive practice. A 5-colony apiary may show what seems to be a valuable fact or principle; the same being called to the attention of all can be much more quickly and fully tried and demonstrated in a multitude of colonies where greater variety of conditions and material are at hand upon which to observe and practice. But, I am wandering.

HOW, THEN, DOES DISEASE SPREAD?

If you take a comb having the disease in it, that is, the spores or germs, and put it into a colony, that colony will very soon have it, and once a colony is foul (Mr. Editor, put this in capitals or print with red ink) IT IS FOUL TO STAY, UNTIL CURED BY TREATMENT OR UNTIL THE COLONY IS EXTINCT. Once a colony is infected with foul brood it will never let go till that colony is dead, and when dead, there is enough infection in that one hive to fix that whole county or State, if the infection can be distributed and planted in its elements—the inside of a larval bee. I have once or twice had cases—rather, two or three cases—in which I thought I found the beginning of foul brood, but it did not continue. I do not recall more than two or three cases in hundreds, and not a single case where there was a goodly number of cells foul, say as much as a dozen.

If, then, it be true that in a hive having combs almost rotten, and right beside it one almost free from the disease, we may conclude that foul brood spores are not floating everywhere like so much dust in the air, not even in a hive with plenty of contagion in it; but my experience shows that the spores are transmitted, and once in their element they are certain to work.

As I understand the development of the disease—I gather these ideas from the scientists—it can be made clear to us common people in the growth of our grains. Put a grain of wheat into soil with moisture and heat, and it is soon a growing plant feeding on the elements in the soil. In feeding, the plant exhausts the soil, or takes out part of its elements and weakens it. The green, growing plant is very easily killed or injured by frost, or any antagonistic force, whatever it may be. So, the spore or seed of foul brood is the ripe seed or kernel; this seed may lay covered, as it were, in its granary of honey, or massed in the black matter in the bottom of the cell, and how long it may stay there, and just what extremes it will stand and still retain its vitality, we do not know, but it is there as the wheat, just waiting to get a chance. Planted, this spore grows in its element, which is the body of a larval bee, taking from the bee as the growing grain does from the soil—feeding—and so takes the bee-life; the tender, growing thing is, comparatively speaking, subject to destruction as is the green wheat, but again it has gone to seed, and it may lie in the granary another month or year of waiting.

What, then, is more simple than that when a bee takes honey from the comb having these minute seeds in it, it should take with the honey some of the seeds and plant them in a larva with the food? The infant bee simply eats its death by taking into its stomach the spore of the disease.

I am quite fully convinced that there will be but *very* few cases of this disease except where the contagion has been transferred from one colony to another in the food fed to the young. I believe that a colony may carry into its hive honey having spores in it, and if there be no brood, and all that honey be consumed by the old bees before any brood is present, that such colony may afterward breed and be free of the trouble. But let a healthy colony carry in honey from a much-infected colony, especially from a colony having died of the disease, and use freely of that honey from a much-infected colony, especially from a colony having died of the disease, and use freely of that honey for feeding the larvæ, there will be a well-developed case, and in not many days' time.

Some think that there are times and conditions more favorable to its development so that its progress in a colony may be slow or fast according to these conditions. I am not inclined to this view, at least that it progresses fast or slow according to climate and weather, or such conditions, except that its growth may be a little stronger in each individual larva if temperature and favorable conditions exist. Suppose that to-day one bee gets a load of honey from a dead, foul colony, and in that load is but one spore, and that the one spore gets into one larva, this being the only contagion in that colony. For that generation of brood there will be just the one larva die. If that happens in April, probably by May there will be from two to a dozen cells of dead brood, and in another month still more; until by September there may be several hundred, yet pass unnoticed by an ordinary apiarist.

Winter passes, and if the colony starts the brood-nest in some part of the combs that had very little or none of the past year's dead in it, there may be very little development until the brood-nest has begun to occupy the last season's combs, or until honey has been used from the old, infected combs. I consider the extent and progress of the disease in each and every colony to be more a matter of how much of the seeds or spores are scattered in the food given, thereby distributing it to the various larvæ throughout the colony. In other words, if the food contains but few spores so that few larvæ are fed or receive these spores in their food, then the spread of the disease is necessarily slow; but let the food be well stocked with these seeds, and where they come into the stomach of any larva that larva is gone.

HOW LONG WILL A COLONY HOLD OUT?

after becoming infected? If you live across the street from me and have one colony, and my one colony dies of the disease and yours carries away all the honey left, which may be 10 or 20 pounds, and if that colony has much brood, such as would be in a normal colony in May and June, then in from two to four weeks you have a very rotten colony. If they got that honey in the fall when breeding was ended for the season, if that honey was all consumed by the mature bees before breeding again started, your colony may escape entirely, though I would expect to find a few cells of disease the following summer. In any case, if the food contains but few spores, but few larvæ will die at the beginning; but if many spores then many die from the start.

It follows, then, that if a colony receives but few seeds to start with, that field (colony) is like a field with a few seeds of corn in it—it must have time to mature more seed, and in turn be planted before that field is fully occupied. A colony receiving but a few seeds to start with may not finally succumb to its fate until often two full years after being inoculated, but, having a full crop of seed sown, may have a full crop of foul brood with the first generation from the sowing. The more brood in the colony when the seed is plentifully scattered, the quicker will that colony reach its end.

The usual progress of the disease where many colonies do the robbing of a foul one, so as to let no one colony get much to start with, will take from one to two years to finish the infected ones. It is no uncommon thing for a colony to get its first seed in the fall of one year and still be alive at the end of *two full years* from the time of infection, and then die out, leaving a hive well-stocked with honey, and that honey in the best possible shape to "fix" any colony that uses it in feeding brood.

This article is already long, and must stop. I will continue the discussion, taking up treatment and cure in my next. This subject is always a hot one; when it comes up in conventions there is almost sure to be "a stirring of the animals." The subject is an important one, and I ask a careful reading of what is said in this discussion, and especially by the inexperienced.

The next article will treat of practical work in dealing with the disease. Larimer Co., Colo.

See Langstroth Book Offer on another page of this copy of the American Bee Journal.

Use of Drone and Queen Excluders.

BY C. DAVENPORT.

I READ C. P. Dadant's article on page 807 (1903), entitled, "The Use of Drone and Queen Excluders," with much interest, but I will say frankly that I do not agree with him, and, if it will not be considered out of place, I should very much like to give my own views and experience in regard to this matter.

It will be easily seen that we hold different views, when I state that I have about 150 queen-excluders, and that I do not believe that I ever invested any money for goods, in one line, that has paid me better from a dollar-and-cent view, or that has saved me more work, than they have. In fact, if I were to be deprived of the use of excluders I should quit producing extracted honey—in a large way, at least. I have produced tons of extracted honey both with and without the use of excluders, and if I know anything at all about our pursuit, it is that I can produce more extracted honey with less work, by using them than I can without them. I say this with all due respect to Mr. Dadant, for I know that I am but a novice in this branch of our pursuit compared with him. But let me briefly explain, or describe, how it works both ways here:

Let us take a strong, or medium strong, colony early in the spring, that is, to run for extracted honey. We will say that they are in either 8 or 10 frame-hives, for there is not much difference in results between the two sizes here in running for extracted honey. On the first colony we will not use an excluder. If it is a strong colony they will, during fruit-bloom, need an upper story, and in a short time the queen will invariably work up into this story, and more or less of these combs will be filled with brood. But now note this: It is very seldom that there is more brood in both of these stories before the main flow commences than the lower one would hold, especially if we are using 10-frame hives. We now have the frames in these two stories more or less filled with honey, pollen and brood. The main flow is on, and they soon need more room. There is nothing in either story fit to extract, so another story is added, and the queen will, nine times out of ten, lay more or less in this third story, but she will seldom go down to the lower story, of her own accord, again that season, unless the colony swarms and she does so in order to get out of the hive. It is now three stories high, which is about as high as it is safe for us to go here without danger of the whole thing being blown over during some of the sudden storms with high winds which we are subject to in the summer.

But if the flow continues good they will soon need more room, and this whole outfit boiling over with bees, old bees, young bees, drones, queens—*somewhere* in the two upper stories—brood in all stages, pollen and honey—it is all mixed up. We take what honey we can get; this may be considerable, but it is never first-class honey that we get from such an outfit. It is tainted more or less with pollen, the excrement from young, just-hatching bees, larvæ and larval food. If we don't extract from frames containing brood we will get but little honey, for there is a *little* brood in a large part of them. A good many who would have to handle 100 colonies in this way would wish the flow to be short, so that there would be only one extracting. We will suppose this to be the case. The whole thing has to be handled frame by frame once more in the fall any way, in order to get the colony in size, shape and condition to be wintered.

Now let us take a colony and use an excluder. When they need more room we place on the excluder and upper story, and know that the queen is, and will stay, where she belongs—in the brood-nest. The bees at once commence to store honey in this upper story, if they lack either storage or brood room below; usually by this time not much more pollen is being gathered than is in demand for brood-rearing, and this is stored below, near the brood. As the flow continues we place another empty story under the first one. By the time they need more room the combs in the upper story will be filled and sealed nearly solid with beautiful snow white honey. In order to clear this of bees, all that is necessary in the evening is to raise up one end and slip under an escape-board; by morning the bees will have gone below, and we have the combs clear of bees, and ready to extract. And, my friends, this is *honey*—pure, unmixed, first-class honey, gathered by bees from flowers. After extracting, this set of now empty combs is placed next, and the other set on top of it, and so on as long as the flow continues, and we don't care how many times we have to extract, for it is a pleasure to produce extracted honey by this plan. We experience and feel a good many of those things we would not sell for money if we could.

In the fall—well, there are different plans that can be practiced to get this latter colony in shape for winter, for they will probably be very short of stores, if they are black or German bees. But, again, note this: We know where the queen is. She is where she belongs—in the brood-nest—and whatever plan we employ to insure the colony winter stores, it is much less work because she is there.

I have not run a colony for extracted honey without an excluder for two years, and have no idea that I will ever do so again. Three years ago I had only about 50 excluders; that season I ran about 150 colonies for extracted honey, and I firmly believe that I secured nearly as much, of a much better grade, from the 50 on which I used excluders, as I did from the 100 colonies without. The next winter I ordered, I think it was 100 or 120, and there is no question but what with me they have paid their cost many times in both seasons since; and they are, of course, barring accidents, good for a life-time. I use, and greatly prefer, the all-zinc to the wood-zinc for two reasons: First, the all-zinc is much less hindrance to the bees; in fact, an all-zinc is practically no hindrance to a colony in storing in an upper story. If they try to carry heavy loads of pollen up through, some of it will get scraped off, which is a good thing. The other reason is, they are much stronger and more durable. The former may split and check off, but new frames can be made, and the zinc itself is everlasting.

I much more than agree with Mr. Dadant in regard to the use of drone-excluders at the hive-entrance.

Southern Minnesota.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

APPROPRIATIONS FOR CURING FOUL BROOD.

An appropriation to cure foul brood, and no power to compel any one to let his bees be cured, looks at first disgustingly like spending money to no purpose. Perhaps the situation is really a little better than that. The localities which are afflicted with contrary folks harboring the disease can just be let alone for future action, while in a good many other localities, happily free from human hogs, more time can be put in, and the most thorough kind of work done. The clean territory ought to increase, and the unclean territory decrease, under the law. But if all the money is spent agitating for an improvement of the law, total failure to accomplish anything *might* be the end of it.

If, when Mr. France started in in Wisconsin, foul brood was in 50 counties, and now he knows but five that contain it, that's pretty strong evidence that public effort does some good. Queerly enough, concerning any disease, dishonest practice, evil, danger or sin that can be named, lots of good people turn up to oppose if efforts of a practical sort are pushed in a definite way. Pages 64-67.

HAULING HOME HONEY FOR EXTRACTING.

So Mr. Aikin can load up his wagon direct from the hives even in robbing times. Tight-covered wagon with bee-escape and screen door. Move lively; smoke plenty; judge correctly when enough bees are out of the super that it will do to chuck the rest in the wagon. Keep the door shut as much as you can—yet trust mainly to the flying out of the bees on the repeated openings of the door. There are robbing times *and* robbing times. As to some sometimes we will take his word that he makes it work; but other sometimes they would surely fly down his throat and choke him off.

On the whole, I guess Mr. Aikin's way of handling extracted honey is the best before the house. And an excellent idea it is to dip combs in sweetened water if you want them cleaned up outdoors without causing too great an uproar. Page 68.

KINKS IN BOTTLING HONEY.

H. Rauchfuss draws it fine about bottling—and wisely, too, I think. If the stream is too warm it will draw fine bubbles of air in with it, and the filled bottle will not be clear. If the stream is too cold it will fold like calico, and fold in air with a similar result. Have it just right—cool as you can without any folding of the stream. Blessed be they that clear up splendidly these nice little points! But, let's see, will it stay liquid as long sealed kind 'o cool, as it will if the whole thing, bottle and all, is raised once more to a high temperature when the cork is put in?—Page 69.

A BEGINNER'S TRIALS WITH BEES.

Mr. Tackaberry is surely a fine example of how a beginner will contrive to get into trouble. But, then, most of them wiggle through it and come out all right. Don't have bees stacked in a room of your house adjacent a room with a warm fire. But and if you do do that foolish thing, at least have the grace to keep the door locked, and the key safe in your pocket—if not "frowed in de well." Page 79.

THE REVERSIBLE-FRAME OPINIONS.

C. H. Dibbern and J. A. Green innocently say, "Yes," while the rest of us, to the number of 25, turn up our Noes-es at the reversible frame. But, then, there's no law against having a better frame than we now have, sufficiently simple and cheap, and reversible, too—if the like of that comes tripping and singing along. Page 85.

BUYING QUEENS IN LARGE LOTS.

Excellent salve for the sore pedals of the tenderfoot to hear an "old stager" tell of buying 250 queens in one lot—and then confess that it turned out to be a bad job. Page 90.

FRONT-END CAR-LOAD FOR MOVING BEES.

So the moving-by-rail experience of Charles W. Sager, is that a stack of hives is bumped forward and oftener than it is bumped backward. Therefore place the stack in the front end of the car. Page 90.

BEE-HOUSE RESULTS—A HIVE-SHIRT.

I think, Mr. McCradie, most of us would quit off from that bee-house that only saves 2 out of 10. But, still, maybe your hole-through-the-wall experiment will be a success. Let us hear.

That hive-shirt of home-made oil-cloth (muslin and linseed oil) is apparently a good thing. But won't the fabric rot under the stone? If the shirt is fastened on tight enough I don't see how the cover is going to get away even without the stone. Possibly the intention is to have the cover on top of the cloth. Page 92.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Tartaric Acid for Preventing Honey-Granulation.

I have been putting up chunk honey in Mason jars. I have met with considerable loss by having the extracted honey candy that I finish filling the jars with. This winter I took some honey and heated it to 160 degrees, Fahr. I put a part of it up by adding and thoroughly mixing tartaric acid in the proportion of a teaspoonful to 20 pounds of honey, and this has not granulated, and looks clear and white, while what was left without acid has granulated nicely. Now, will the honey be just as wholesome for food with the acid in it? and is it advisable to put up chunk honey with the acid? Iowa.

Answer.—I doubt very much the advisability of putting in any foreign substance whatever. Even if you are sure that it does no harm (and the acid would do at least a little harm), the name of putting something into honey would open the door for the charge that it was adulterated.

◆

Stimulative Feeding—Wintering—Making Nuclei.

1. Will ½-pint of sugar syrup fed daily be enough to stimulate and carry on brood-rearing in the spring, when no honey is in the hive? If not, how much?

2. Tell me how your bees are, and have been, wintering in that furnace-room.

3. How small a nucleus will winter to good advantage

where one wants to save some extra queens in the fall? Last fall I wintered about 1 quart of bees on 4 combs of honey, and by the next May they covered 3½ combs, and proved to be as good an any colony I had. But this winter they were dead Jan. 15, and 25 full colonies besides.

4. Do you think your method of increase, that you described to "Illinois," page 170, is any better than the way W. W. Somerford does, page 260 of Gleanings in Bee Culture for 1899?

What I mean is, to have all colonies for increase *very strong* by the commencement of the honey-flow, then divide into 8 or 10 nuclei, and give each a ripe queen-cell. By "strong," I mean each old colony to have a double brood-chamber, each nucleus to have the remainder of the hive with drawn comb. I am anxious about this increase matter, as I will have only about 35 colonies left out of 80 this spring, and I want them to store enough to winter on, and would like to make 100 colonies out of 10. OHIO.

ANSWERS.—1. Yes. But that way of living from hand to mouth is hardly the best way. Bees seem to have more sense than some folks, and if they have just enough to do from day to day, they seem to say, "We haven't on hand enough stores to last very long, and we had better go a little slow about starting a lot of brood that we may not be able to feed later on." With a good reserve on hand, you may find the bees will need little if any stimulative feeding.

2. I don't know. Not out of the woods yet. Too warm, though. Most of the time above 50, sometimes up to 60. Wait a minute, and I'll go and see what it is now........... Well, the thermometer in the cellar stands at 56, and the bees are unusually noisy. The trouble is that it is a muggy sort of a day, with the thermometer outdoors at 46. If the outer temperature was zero, the bees would be very still at 56 inside, for in that case the air in the cellar would change more rapidly. So far as I can judge they are doing fairly well, but they would probably do better if there were not so many in one room.

3. From your own statement one would judge that in a mild winter a quart of bees would do very well, but in a severe winter three quarts would be none too many. That's for outdoors. In the cellar less than a quart might do, whether the winter was mild or severe; especially if two nuclei were kept in a double hive with a thin partition between them.

4. Much depends on the locality and the season. If you are sure of a good flow and a long season, then it may be better, and certainly will be less trouble, to wait till all are strong (which should be done in either case), and then finish up the whole business by dividing into the total number. But it would be a very risky thing in my locality, and very likely it would be in yours. For if the season should be poor or short, you might have the fun of doubling up again in the fall.

Comb vs. Extracted Honey—United Colonies—When to Put on Supers.

1. What is the difference between working for comb and extracted honey? I wish to run for comb honey only.

2. Would you leave the combs in the brood-chamber that have been emptied the past winter? I find them in good shape.

3. I have 2 light colonies of bees, in the cellar, and wish to unite them as soon as I can. How soon can I take them out of the cellar (to place them on the summer stands) and unite them?

4. Would you put supers on before the brood-chamber is filled? MISSOURI.

ANSWERS.—1. The chief difference is that in one case the finished product is in white combs, and in the other the honey is liquid, combs being used over and over again, and the honey thrown out by an extractor.

2. Yes, if in good condition they are better than new.

3. As soon as warm enough to fly nearly every day, say after red maples are in bloom.

4. No, not till it is filled and the honey harvest is nearly on.

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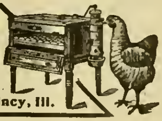

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PAGE HOG FENCES
hold the whole litter BECAUSE they are woven closer at the bottom. Write for descriptions.
PAGE WOVEN WIRE FENCE CO., Adrian, Michigan.

FROM MANY FIELDS

Helping to Sow the Seed.

I am a reader of the weekly American Bee Journal, and read it with much interest. When through with them I take them out on the road with me, and toss them from my engine-cab window to all the farmers that I see having one or more colonies of bees.

W. W. MURPHY.

Linn Co., Mo., March 7.

Caught Short on Supplies.

The American Bee Journal has been lots of help to me in handling my bees. Last season was good, but it caught me short of supplies, so I gave one colony the advantage of the rest, just to see what it would do, and the result was 121 nicely filled sections, for which I got $24 20. I do not intend to be caught that way this year. ALFRED RIVES.

Montgomery Co., Ill., Feb. 9.

Comb Honey Management.

I put the supers on the strongest colony Jan. 25, and the bees are working in them. The honey is from gum-trees, manzanita, and other flowers.

I find the best way for comb honey is to tier up and take no honey from the bees until they swarm, or until the honey season is nearly over, and give them big entrances in warm weather. Last year I told a friend to do this; he had 17 colonies of black bees, and had as many as 4 or 5 supers on at a time, and got from 100 to 120 sections of honey, all finished. He had only one swarm from each colony; before that he had intended giving up bee-keeping because they did nothing but swarm.

I may be mistaken as to the cause of honey granulating, but this is my opinion: Honey

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that is gathered all from one plant always granulates, but honey gathered from all kinds of flowers never does. I have never heard of it granulating in this place.

I run my bees in 8-frame Langstroth hives.

I saw in a daily paper that there was a big meeting of bee-keepers at Hanford the other day; they are going to club together to get more money for their honey, and also get cheaper hives. R. THOMPSON.

Marin Co., Calif., Jan. 3.

A Terrible Winter.

Isn't this winter terrible? But as terrible as it is, my bees had a glorious flight on the 6th of this month. I looked through them all and found them in good condition. Plenty of stores left. The knowledge of that took an anxious burden off my mind. The next day (Sunday) it was 40 degrees colder, and it has been still colder since.

The double-size number of the Bee Journal was fine. All of them are.

R. B. MCCAIN.

Grundy Co., Ill., Feb. 10.

Blessed with Some Rain.

Since writing you a day or two ago, California has been blessed with a fine rain, and the hearts of all have been made glad. It amounted to 1.13 inches at this point, making for the season, to date, 1.70 inches. The storm has cleared, and it is very pleasant outside to-day. ALBERT ROZELL.

Los Angeles Co., Calif., Feb. 6.

Too Long Confinement.

My bees had a good flight the 6th. So far I have lost 6 colonies—I think, from too long confinement. I winter them on the summer stands. Six days more of confinement would have made it 3 months since they had had a flight. Most of the balance (69 colonies) are in good condition at present.

JOHN S. DOWDY.

Logan Co., Ill., Feb. 8.

Results of the Season of 1903.

Last spring my bees were taken from the cellar and placed on the summer stands April 1. My winter loss was 5 colonies, and I had 15 left, all in good condition. One of those that died during the winter starved to death; the other 4 had plenty of honey. I don't know the cause of their dying.

My bees built up very fast, and by the last of May had become so strong that they commenced to swarm. I put supers on early, as I discovered that they were getting strong. They went into the supers and commenced to fill them with honey, but swarm they did. This was not the case with my bees alone, but it was the almost universal complaint, very few exceptions. It made no difference whether they were worked for comb or extracted honey, they seemed to have the swarming fever, and nothing would stop them until the fever abated.

Notwithstanding the swarms that issued they gathered a large amount of honey; there were many tons of honey gathered in this and adjoining counties. My bees did very well the first part of the season, but not as well as many others. My colonies increased to 42, but I doubled 10 colonies and made 5, giving me 37, and they produced 500 pounds of comb honey, and two-thirds of this was taken from old colonies that cast two swarms each. The honey season closed with the end of basswood and clover bloom. The amount of fall honey gathered in this section of country was so insignificant that it is not worthy of mention. This accounts for the small amount of honey I obtained from my 15 colonies, spring count, or 37 at the close of the swarming season.

When the honey-flow stopped all the late swarms ceased to build comb or gather honey, consequently when the time came to put them in winter quarters I found 10 colonies too light, both in bees and honey, to think of wintering them, so I was just cruel enough to destroy the bees and extract the honey and save the combs for use next season. I expect

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to be severely criticised for resorting to this method of disposing of bees, but before you pass sentence just bear in mind that I am 80 years old, and notwithstanding my age I am not a millionaire but am an old soldier supported mainly by a pension, and broken down in health. I have 27 colonies left, unless some of them die during the winter—and that is all I feel able to take care of the next season.

It is often the case that a colony of bees will be found doing something different from their customary habits. I had such a colony last season. They cast a swarm May 28, and after flying around for a time they returned to their hive. As they were returning I looked in front of the hive and found the queen. I put her on the alighting-board and she went back into the hive with the other bees. In just a week they came out again and clustered, but before I could hive them they returned not only to the hive where they came out, but also into the one that was about one foot away. There was no fighting, no bees killed, neither could I find the queen. I will number this first hive No. 1, and the last one No. 2. I keep a long board in front of my hives for an alighting-board, and the next day after the second return the bees were running back and forth from No. 1 and No. 2, and this continued for several weeks, then they swarmed the third time, and clustered with another swarm that came out at the the same time, but the communication was kept up between Nos. 1 and 2 the same as before.

After a few weeks I discovered that the bees in No. 1 were getting less; they were weak, and I supposed they were queenless, so I took the top off one day to examine them and found a queen stuck fast to the top of one of the frames. I liberated her and she went down among the other bees. I let them remain for a long time, but they continued to dwindle, so I took the frames out and shook the bees off; they had not done any robbing during this time, for I extracted 4 gallons of honey which was nicely capped over.

I have a home market for all my honey at 15 cents a pound, and I received first premium on best display of honey at our county fair, also first premium on clover honey and basswood honey, amounting to $7.00 in all, which would make about 17 cents a pound that I received for my honey.

It was a very wet season last year, and but little honey gathered after the first of August, and those who put late swarms into the cellar without feeding will be liable to meet with some loss.

I examined my bees last week and found them all right. In this section of the country we have to keep our bees in the cellar 4½ or 5 months, and this is a great hindrance to success among bee-men.

Last summer June and July were the only months that bees stored any surplus honey.

My bees are Italians, and they are the best-natured bees I ever worked among.

I agree with Mr. C. Alexander, page 813, (1903), that the American Bee Journal has taken quite an advanced step since Mr. Newman left it; and I don't think that this opinion detracts anything from Mr. Newman's good work, for this advance step is in accordance with the law of progression, which is the law of Nature, and the present Editor of the Journal keeps abreast with the progress by apiarists. S. B. SMITH.

Millelacs Co., Minn., Feb. 11.

A Mild, But Long, Winter.

Bees will open, I think, in excellent condition, as I notice they are flying strong from all my hives. The winter has been milder than usual, but very protracted.

A. H. NOBLE.

Davidson Co., Tenn., March 11.

Moving Bees—Cold Winter.

I have just finished reading last week's double number, and I am much interested in the report of the Chicago-Northwestern convention.

I think those people that have received the benefits from foul brood inspection would be rather backward in making it public. (I

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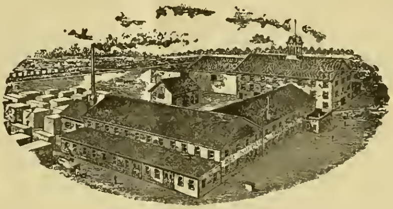

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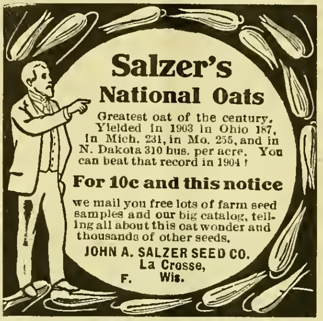

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should be ashamed if I had to call the inspector to treat my bees.)

I closed my hives with a block in front of the bottom entrance and put wire-cloth over the 1-inch hole in the middle of the front, fastening the bottom-boards and covers with screw-eyes and nails and wire, then loaded them upon a sleigh with the hive backs to the center, and two hives high, the frames being crosswise of the sleigh. They came through in good condition and seem to be wintering as well as can be desired, in the house-cellar here. (I moved them about 50 miles during November.)

We have had the most severe winter here up to date that I can remember, the thermometer having reached 40 degrees below zero all around us, and only two thaws since winter began. HOWARD H. HOUSE.

Otsego Co., N. Y., Feb. 6.

Hard Winter on Bees.

This is a hard winter on bees, especially for those packed on the summer stands, for they did not have a flight or even a chance to move around since the first part of November. Many a day the mercury has dropped below zero, and a couple of days as low as 38, and little prospects of warm weather at present. I will report later how they turn out.

C. J. OLDENBURG.

Scott Co., Minn., Feb. 27.

Loss of Bees 25 Percent.

I am waiting for suitable weather to overhaul the bees; the loss will be heavy this time. Colonies in chaff or well-protected are all right. Colonies used for queen-rearing are gone. About ¼ of mine were thus used, but good care did not save them. The brood-nest was changed towards the place where but little honey existed; they consumed all, and starved. I place the loss not less than 25 percent. J. F. MICHAEL.

Randolph Co., Ind., March 3.

Bees in Best Condition.

The good, mild winter still continues with us. Since Jan. 1, 1904, my bees have had nice flights on 10 days, the last one being on Feb. 24. All of my bees are in the best condition, so far, and I am longing for the time when they can be out gathering the first nectar and pollen. WM. STOLLEY.

Hall Co., Nebr., Feb. 27.

Early Pollen-Gathering.

My 13 colonies of bees are safe so far. The last 4 or 5 days have been warm, and they have been working hard carrying in pollen and cleaning up. This has been an open winter, not much snow and not very cold, but rather dry.

I am busy getting hives ready for spring. We hope for a good crop, but don't expect anything like last year. The bees gathered the first pollen Feb. 25. How's that?

A. J. FREEMAN.

Neosho Co., Kansas, March 1.

Average Crop Last Season.

I had 7 colonies of bees last spring, and increased to 16. I run for comb honey exclusively, as there is no sale here for extracted honey. From 12 colonies I got 700 pounds of comb honey, selling it all at home for 15 cents per pound. There was an average crop of honey here.

I use the dovetail and St. Joe hives. I expect to increase to 40 colonies this spring.

A. E. PATTON.

Lawrence Co., Mo., March 8.

Bees Show Up Well, Considering.

At last, on March 2, the bees had a fairly good flight. The temperature in the shade was only 40, but the air was still and the sun bright. The bees have lost their restlessness and show up pretty well, considering the severity of the winter.

I think that the loss about here has been

severe, for it is not customary to protect the hives. I myself have lost no colonies, but I have several which are in poor shape for spring work. ALLEN LATHAM.
New London Co., Conn., March 7.

Great Mortality of Bees.

There is a great mortality among the bees of this locality, as they have not had a good flight since last fall. We have lost 15 out of 54 colonies so far, and more are slowly dying with dysentery. C. A. BUNCH.
Saint Joseph Co., Ind., March 14.

Bees Wintering Well.

Bees are wintering well in this vicinity, with daily flights since Feb. 29. The longest periods between flights this winter was 15 days in December, 19 in January, and 17 in February. They are visiting the water-troughs freely, and have begun rearing brood. I. L. LYMAN.
Lancaster Co., Nebr., March 6.

Working the Home Market.

I now have about 250 colonies of bees, well graded Italians. My honey crop for 1903 was 12,000 pounds, about half comb and half extracted. I sold it in the home market at a net price of 9 cents a pound. Those bee-keepers who produce a few thousand pounds, or a few hundred pounds, can't do better than work their home market. LON ROSSON.
Ellis Co., Texas, March 9.

[Suppose you tell us your method of working the home honey market, Mr. Rosson.—EDITOR.]

Good Report on Wintering.

We wish to report that our bees are having a grand flight to-day, and have wintered well out-doors this winter, while the thermometer has registered, from December 15, 1903, up to Feb. 22, 1904, all the way from 10 to 39 degrees below zero.

Nov. 1 we packed 95 colonies in planer shavings, of which we have to-day 90 boiling-over colonies. We lost one by starving, and four were queenless. How is that? R. H. SCHMIDT CO.
Sheboygan Co., Wis., Feb. 28.

Worst Winter in 25 Years.

This has been the worst winter on bees for a quarter of a century. They have been unable to get out of their hives in safety since last October. EVAN E. EDWARDS.
Madison Co., Ind., March 12.

Thinks the Bees Will Winter.

I put 66 colonies in a bee-house, all in good shape and well supplied with honey, and I guess they will get through the winter all right.

My honey crop was not very large last season; I had 1500 pounds of extracted honey. Last year was too wet and cold for bees. I had so many weak and queenless colonies. I hope this spring will be better. MATH FISCH.
Sheboygan Co., Wis., March 8.

Flying From All Hives.

I have not been able to see how the bees wintered, but the folks say the air is full of them the days they could fly out, and that they were flying from all the hives; but I will find out when the weather will permit me to go out-of-doors. D. C. MCLEOD.
Christain Co., Ill., March 10.

Wintering in a Bee-Cave.

I have a cave dug in a side hill, with double doors, and about as nearly air-tight as I can make it. It is 9x8x16 feet. I have 38 colonies in it, and they appear to be wintering in fine shape. I go in and shut the door and they seem to be perfectly quiet. C. J. BARBER.
Monona Co., Iowa, March 3.

The German Steam Wax-Press.

I notice on page 104. how Mr. Rauchfuss set fire to his honey-house by melting wax on a stove, while others melt their wax out-of-doors. Now I advise them all to get a German steam wax-press, and melt their wax by steam, then they can work in the house, and no damage done. I have tried it and would not do without one. WM. LAKE.
San Diego Co., Calif., Feb. 28.

Report for Last Season.

I have a small apiary, and am wintering 60 colonies, mostly Italians. I use the St. Joe hive. My crop, last year, from 45 colonies, was 4200 pounds of section and box honey, 2300 pounds of extracted honey, and 60 pounds of wax. I also have 50 hives filled with 50 extracting combs for swarms the coming season. F. G. ASHBAUGH.
Livingston Co., Mo., Feb. 20.

Looks Unfavorable for Honey.

We have had only 1½ inches of rain. It looks the most unfavorable for a honey crop I've ever seen it at this date. However, we have about 8 tons of last year's crop left, and also 4 or 5 tons of the season farther back. We are selling it at 7 and 9 cents, according to quality. I left them 40 to 60 pounds to the colony; that ought to pull them over all right. C. W. DAYTON.
Los Angeles Co., Calif., Feb. 18.

Complaining Does No Good.

Dead as a door-nail! And I had gone to special pains to protect them for the winter.

I have for years left them on the summer stands, and by leaving plenty of stores, covering the hives with old carpets and blankets, and afterward turning over them a large box,

Langstroth on the Honey-Bee

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This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

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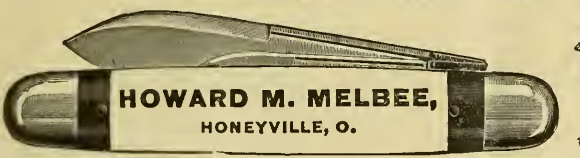

[THIS CUT IS THE FULL SIZE OF THE KNIFE.]

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last-time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00.) We will club the Novelty Knife and the Bee Journal for one year, both for $2.00.

GEORGE W. YORK & CO. Chicago, Ill.

☞ Please allow about two weeks for your knife order to be filled.

I have never before failed to winter them nicely.

But this 20 degrees below was too much for them!

I imagine others have met with equally depressing experiences, and that soon they'll begin to "holler."

If so, it will mean a short honey crop, incident to lack of bees.

But it's no use—the only way is to start fresh and build up quickly, ready for white clover season, at least.

Certain it is that complaining and "cussing" one's luck does no good. Pitch in and win! Dr. PEIRO.

Cook Co., Ill., Feb. 24.

Some Experiences with Bees.

In 1902 I brought my 52 colonies of bees out of the cellar on March 24. They were all alive, but 4 were queenless, and I sold one, leaving me 47 colonies. I fed about 25. It was a cold spring which prevented swarming until June 18, when I had the first swarm. In the fall I had 100 colonies, but decreased them to 66, then the cold November days stopped me from this work.

In 1903 I brought out some of my bees on March 13, and the balance March 18. They were all healthy, and I sold one colony. It was another cold and wet spring. The only colony that ever died from starvation for me was my first one—a second swarm—I bought on June 5, 1889. But I nearly lost one last spring. One morning I saw dead bees in the entrance, and on opening the hive I noticed bees between the brood-frames. They soon began to move slowly, so I hastily made sugar syrup and sprinkled some over them; in a short time bees were seen in the entrance, but this caused robbing, so I put them back into the cellar for 5 days. After all, I took about 60 pounds of comb honey from them.

My first 2 swarms appeared on June 21. Then about 10 came that could be hived separately, but the hottest day they clustered together—how many? Say from 15 to 17 swarms. I hived them in 7 hives and gave to some 1 super, and to others 2. The next day I heard, "Bees are swarming!" My answer was: "O, that is one of those I hived yesterday!" They went about 25 rods south into a neighbor's lot. I gave up hiving them, as it was a very hot day, and, being a weak person, I considered my life worth more than the bees.

That afternoon the lady came to tell me the bees left there, and settled in a small oak-tree in my lot. I took a hive and one super to the place and shook the bees from the limb to the ground. They all went into the hive. I then increased the supers to 3, each containing 32 1⅞ inch sections, and they filled them all.

To make a long story short, I will say about 2½ prime swarms clustered on a cherry-tree. They didn't wait until I came with a hive, but said, "Good-bye." I was glad of it, because the honey makes too much work. All after-swarms must go back where they come from.

Let me tell you an incident relating to a swarm that came out one sultry day. I went out into the yard with a pail of water to keep them from clustering on the grape-arbor. I didn't wear a veil, and this was the first time that bees ever made me retreat to the house. After putting on various articles to keep out bees, I heard a cry from the hen that was imprisoned in the yard so her young chickens might eat the millers and other insects from the grass and around the bee-hives. She was trying to escape through the laths on the box, so I overturned it and found her almost completely covered with bees. She ran this way and that way. Finally we got her into an empty hay-barn, where we caught her, and my daughter took 8 stingers out of her head. The young chickens got stung more or less also, but since I have them in the garden the bees and I are troubled less with millers. And the chickens don't eat the queen or bees as some fear, and have asked Dr. Miller about it.

I decreased my colonies from 102 to 53, and brought them into the cellar on December 4. I have packed 5495 pounds of No. 1 white clover honey in shipping-cases holding 24 sections. I had an offer of 9 cents per pound, prompt acceptance, in December.

In 1901 I sold my honey for 13 cents per pound, and in 1902 I sold 3020 pounds of white clover honey at 13½ cents per pound, and 200 pounds of fall honey at 12 cents per pound. They came from Green Bay, a distance of 16 miles, with a team, and took all on one load. I also sold 100 pounds st 14 cents per pound. This company called for my honey before I had started packing. After some corresponding I came down from 13 cents to 11 cents per pound, and asked if that suited them; but no answer. Now, a bee-keeper in Illinois was angry that some sold their honey for 10 cents per pound. After selling it at 9 cents, and casing it, how much money

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The book contains 328 pages, is bound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with over 100 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard.
The first few pages of the new book are devoted to an interesting biographical sketch of Dr. Miller, telling how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters, and shows in minutest detail just how Dr. Miller does things with bees.
HOW TO GET A COPY OF DR. MILLER'S "FORTY YEARS AMONG THE BEES."
The price of this new book is $1.00, post-paid; or, if taken with the WEEKLY American Bee Journal for one year, BOTH will be sent for $1.75.
Or, any present regular subscriber to the American Bee Journal whose subscription is paid in advance, can have a copy of Dr. Miller's new book *free as a premium* for sending us Two New Subscribers to the Bee Journal for one year with $2.00. This is a magnificent offer, and should be taken advantage of at once. For many of our readers it is not only an easy way to earn a copy of the book, but at the same time they will be helping to extend the subscription list of the old American Bee Journal, and thus aiding also in spreading the best kind of apicultural information among those who would be successful bee-keepers.
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GEORGE W. YORK & CO.,
334 Dearborn Street, CHICAGO, ILL.

SOME GOOD PICKING
SOME BETTER INSIDE

Cover design of the free catalog issued by the Scott Incubator Co., Indianapolis, Ind.

is left? Or if a bee-keeper can't sell his honey at all, what shall he do with it?

I wrote to a bee-keeper that he was lucky to have no room to store his honey. He had told me that he sold his comb honey for 11 cents and extracted for 7 cents per pound. I just got a letter from him saying, "The store-keeper has all my honey on hand yet; 3500 pounds of comb and 800 pounds of extracted."

I sell my extracted honey at home for 8 cents a pound, but it is selling slowly.

There has been some talk about eating honey. I eat more than 100 pounds a year, and never touch anything sour.

A farmer bee-keeper has a book in which I found the following advice: "Paint your hives 4 weeks before hiving a swarm in them; bees don't like the smell of the hives." I know better. When painting wagons, bees visited me, and I have painted bee-hives inside and out, and hived swarms in them the next day.

When giving up my trade—wagon-maker—I had some 7-inch basswood on hand. I made supers from them and I also have a few hives from basswood lumber. They won't warp any more than pine. and last as long when kept painted.

The first swarms I ever hived was on June 23, 1890. The queen piped on July 4, which meant that the second swarm would come on July 7. I wrote this to the American Bee Journal before, and have known it over 50 years, so Dr. Miller may answer to those who have but a few colonies: When your queens have piped 3 evenings, you will be sure to have the second swarm the next day; and not: If you hear your queens pipe to-night, watch for swarms to-morrow. It takes too much time to watch for queen-piping for those who have so many bees. Why didn't Mr. Hasty tell Dr. Miller about this queen-piping?

I extracted my unfinished sections, put them into a box, and then gave them to the bees and let them clean them out slowly.

WM. DUESCHER.

Brown Co., Wis., Jan. 29.

CONVENTION NOTICES.

Michigan.—The Northern Michigan bee-keepers will hold their annual convention March 30 and 31, 1904, in the Moutague Hall, 127 Front St., Traverse City, Mich.

GEO. H. KIRKPATRICK, Pres.

Rapid City, Mich.

Utah.—The spring convention of the Utah Bee-Keepers' Association will be held April 5, at 10 a.m. and 4:30 p.m. Among other important questions to be considered will be the World's Fair, our State Fair, and the Portland Fair of 1905. We also desire to formulate some plan, if possible, to further increase the fraternal interest for the mutual benefit of our bee-keepers. We cordially invite all bee-keepers to be present. We also invite them without delay to send in their views on these and other topics. The convention will be held in the City and County building, in Salt Lake City.

Salt Lake City, Utah. E. S. LOVESY, Pres.

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11A4t R.F.D. No. 1, EAST JORDAN, MICH.
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We need a few thousand pounds more of Comb Honey for our trade in Kansas City and Omaha. Any person, any where, who wants to cash up his Honey Crop at a wholesale price, we would be pleased to hear from, with complete description and lowest price delivered to their depot. West of Kansas City and Omaha it should be in car-lots.
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WANTED! FANCY COMB HONEY
In no-drip shipping-cases. Also Amber Extracted in barrels or cans. Quote your best price delivered Cincinnati. The Fred W. Muth Co.
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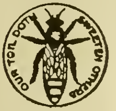
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A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.
The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10c; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

A Life Sacrificed.
Russell, Kans., Feb. 4, 1904.
STROMBERG-CARLSON TEL. MFG. CO.,
Chicago, Ill.
Gentlemen:—
I am working a great deal this winter, working up telephone lines. I have been handling the——and the——telephones, and would like to make a deal with you for 25 or 50 of your telephones. Would send cash with order or as soon as received. I could give you satisfactory references. I mean business and will deal with you if prices suit me. I would want prices on four or five bar 1,600 ohm bridging instruments.
One of my boys was working on my farm in Pawnee Co., Kan., 15 miles from the doctor. He was taken sick with appendicitis, and if I could have had a telephone there I might have gotten a doctor in time to have saved his life. So you will see I know the importance of having telephones in the country and have worked up a telephone line on my farm to town and am now working up some lines in Russell County. Am doing this work not so much for my gain but in time of need. Respectfully, W. W. COOK.

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HONEY AND BEESWAX
MARKET QUOTATIONS

CHICAGO, March 8.—It is difficult to get more than 12c per pound for any lot of white comb honey, with sales chiefly at 11c; even at this price it does not work off as fast as owners wish it would. Selections in the most desirable grades bring a little higher price in small quantities; off grades sell at 1@2c per pound less. Extracted honey plentiful and slow of sale; white brings 6@7c; amber, 5@6c, according to quality and style of package. Beeswax active at 30c. R. A. BURNETT & CO.

CINCINNATI, March 19.—The honey market continues to be dull, and if anything the prices on comb honey are lower; concessions are made on bigger lots. I quote: fancy white comb from 12½@14c. Sales on extracted are made at the following prices: Amber, in barrels, 5¼@5¾c; in cans, ½c more; alfalfa, water-white, 6@6½c; strictly white clover, for extra fancy, 7½@8c. Beeswax, 30c.

C. H. W. WEBER.

PHILADELPHIA, March 9.—There has not been much change since last quotations on comb honey. Small lots have been arriving freely, but principally of poor quality, and have been sold at whatever the commission man could get for them, ranging from 10c up. We quote fancy comb honey, 14@15c; No. 1, at 12@13c; amber, at 10@11c. Extracted honey, white, at 7½@8c; amber, 6@7c; Southern, 5@6c, according to the package. Beeswax selling readily at 31c. We are producers of honey but do not handle on commission. WM. A. SELSER.

CINCINNATI, Mar. 4.—The demand for honey is brighter than it has been in the past 60 days. We continue to offer amber extracted in barrels at 5½@6½c, according to quality. White clover extracted is a drag on the market at 6½@8½c in barrels and cans. Comb honey seems to be reviving at 13½@15c for fancy.

Beeswax, 30c. THE FRED W. MUTH CO.

ALBANY, N. Y., Feb. 1.—Honey demand very light. Prices of comb honey are largely now what the buyers will offer—from 10@15c. We look for better demand when weather is warmer. Extracted doing some better at 7c for white, 6½c for mixed, and 5½@6c for dark and buckwheat. Beeswax, 28@30c.

H. R. WRIGHT.

BOSTON, March 7.—The condition and price of the market on honey has not altered. Strictly fancy Eastern honey is scarce. Western honey will not bring as much here. We quote fancy white in glass-front cases at 16c; No. 1, at 15c. Supply is ample, and demand light at this time. Extracted, water-white, 8c; light amber, 7@8c; with but little call for dark Florida.

BLAKE, SCOTT & LEE.

KANSAS CITY, Feb. 24.—There is no change in the price of comb honey; the supply is large. The receipts of extracted are large and the demand very light. The market price is: Fancy No. 1, comb, 24-section cases, $2.25; No. 2 stock, $2.00. Extracted, white, per pound, 6@6½c; amber, 5½@6c. Beeswax, 30c.

C. C. CLEMONS & CO.

NEW YORK, March 7.—The market on comb honey is decidedly dull. There is some demand for white honey, but prices are ruling rather low. We quote fancy at 13@14c; No. 1, at 12c; amber, at 11c, and in round lots even these prices have to be shaded in order to effect sales. There is no demand at all for dark and buckwheat comb honey, and it looks as if some of it would have to be carried over. We quote nominally at 9@10c per pound.

There is a fair demand for extracted honey, at irregular prices, fancy white bringing 6½@7c; light amber, 5½@6c; other grades, 5@5½c; and Southern, common to fair, 50@55c per gallon. Beeswax firm at from 29@30c.

HILDRETH & SEGELKEN.

SAN FRANCISCO, March 9.—White comb, 1-lb. frames, 11½@12c; amber, 8@10c. Extracted, white, 5¼@5¾c; light amber, 4¼@4½c; amber, 3¾@4¼c; dark amber, 3¼@3¾c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

Trade is rather slow. Asking prices remain much the same as for some time past, but wholesale transfers are difficult to effect at full current figures. Offerings of both comb and extracted are sufficiently large to admit of considerable activity.

HONEY AND BEESWAX
When consigning, buying or selling, consult
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FOR SALE—600 colonies from the Virginia apiaries belonging to the estate of the late Capt. J. E. Hetherington. These bees are Carniolans, bred from carefully selected queens, are perfectly healthy, and in the Hetherington-Quinby hive. They have had the personal care of Capt. Hetherington. For further information address, H. B. HETHERINGTON,
After April 1st, Cherry Valley, N. Y.
HARDESTY, Warren Co., VA. 11A3t

Bee-Ranch For Sale.

20 acres of land, all in grain; small house, barn, workshop, and 100 colonies of bees for sale. As I wish to go into other business I will sell cheap for cash. It is a good location—alfalfa and white clover. Write to
J. D. RANNELLS.
12A2t LITTLE SHASTA, Siskiyou Co., CALIF.

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Why does it sell so well? Because it has always given better satisfaction than any other. Because in 26 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

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Langstroth on the Honey-Bee—Revised
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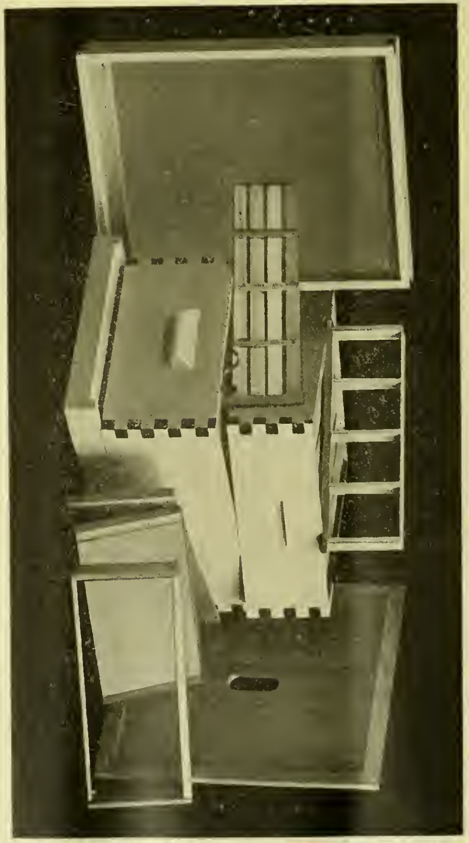
OUR **New Acme Hive** will take any style of Super.
This cut shows it with the Super for 4x5x1⅜ plain sections.



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AMERICAN BEE JOURNAL

WEEKLY—$1.00 A YEAR.
Published by GEORGE W. YORK & CO., 334 Dearborn Street.

44th Year. CHICAGO, ILL., MARCH 31, 1904. No. 13.

WEEKLY

When the Bees are on the Wing.

By C. H. BENSON.

Oh ! the dreary, lagging Winter, when the earth is robed in snow,
With the mercury at zero—or an inch or two below ;
When the bees are in the cellar, and the birds have Southward flown,
And the wind sighs round the gables with a broken-hearted moan ;
How we long for indications of the coming balmy spring,
When the pussy-willows blossom, and the bees are on the wing.

But in May the heart grows lighter, when the orchards are in bloom,
And we watch the busy workers as they swiftly go and come ;
And the birds back from the Southland cheer us with their gladsome song,
As we spread the brood a little—help the colonies grow strong ;
Then the world is full of gladness, and the heart can't help but sing.
The honey season's almost here—the bees are on the wing !

Then comes June—Queen-Month of summer—when with joy the bee-man sees
That the hives are running over with the busy, working bees ;
And we scarce can eat our dinner without hearing an alarm,
And we leave the table hungry to go out and hive a swarm ;
And we hustle on the supers, and we do not mind the sting,
For the honey's in the clover, and the bees are on the wing.

In the New Earth that is promised, when our Lord again shall come,
And our Father with His saved ones on that Earth shall make His home ;
When the glory of His presence shall make glad each faithful heart,
And of all the New Earth's bounties each shall freely take his part ;
When we feast on milk and honey, in the Palace of the King—
There I hope to hear the humming of the bees upon the wing.
Barry Co., Mich.

THE VOICE OF THE PEOPLE

DANZENBAKER'S HIVE.

MORE HONEY. BETTER PRICES.

WE HAVE TOLD YOU SOME THINGS

—ABOUT THE—

DANZENBAKER HIVE

FOR COMB HONEY.

NOW SEE WHAT OTHERS SAY.

MORE HONEY.

Union Bridge, Md. Feb. 9, 1901.
The A. I. Root Co., Medina, O.

Gentlemen:—I saw in a recent issue of your paper that you have a department called "Reports Encouraging." I shall send you my report.

I use the Danzenbaker hiv and will give you report of the same, as the few dovetailed hives that I use do not compare at all with the Danzenbaker. One colony gave me over one hundred pounds No. 1 white honey and the rest averaged about sixty, with an increase by natural swarming of one hundred per cent. A friend of mine who uses all sorts and kinds of hives in his apiary succeeded in making scarcely enough honey to pay for the foundation used in the sections. This was about two miles from my apiary. Long live the Danzenbaker hive! It is just the thing for this locality.

Yours truly,
J. B. Hollopeter.

Mallet Creek, O., Sept. 25, 1902.

I have now 250 colonies of bees, of which 170 are in the Danzenbaker hives, and shall have all my bees in Danzenbaker hives next spring. During this past poor season, 30 or 40 of the colonies in the Danzenbaker hives gave over 100 lbs. surplus. On the average I get more than double the amount of honey from these colonies that I do from those in the old chaff hives. With a 7-inch telescopic cover, the Danzenbaker hive winters the bees better than the chaff hives.

Vernon Burt.

MORE HONEY AND BETTER PRICES.

I have used both square and tall sections in all my apiaries five years, and know from practical experience that it will pay to discard the 4¼ sections, and use only 4x5 sections, and the Danzenbaker hive with the fence separator. They have made enough more this season in the same yard to pay for the hives. I have made *more money* this season per hive than I have any previous year in my 15 years of bee-keeping. Fifteen of my strongest Danzenbaker hives made me a ton of honey. When it comes to sales I get more for the 4x5 sections, and have no work in cleaning them. I ship them as I take them from the super. This is not the case with the 4¼ section. I make honey to sell, and anything that sells the best, and for the most money is what I want out of the bee-business.

S. D. Matthews.

In Gleanings, p. 931, Dec. 15, 1899.

Mountain View, N. J., Oct. 6, 1897.

I have run my hives largely with the Danzenbaker sections this year, and shall increase my facilities for the Danzenbaker output next year. I sold all my fancy clover in Danzenbaker sections, glazed, to two fancy grocers in New York, at 20 cts. a section; were retailed at 25 cts. each. My 4¼ sections, unglazed, sold to grocers at 12½ to 13 cts., retailing 16 cts. I furnished cartons with the 4¼, which cost nearly as much as glass.

B. F. Onderdonk.

BETTER PRICES FOR DANZY. HONEY.

Rock Valley, N. Y., Feb. 22, 1901.

My bees gathered no surplus after July 1. I had only 1200 lbs., but I obtained a fancy price—15½ for "Fancy" and No. 1 white, and 14½ for No. 2 here at my station for all the Danzenbaker 4x5 plain sections, used on your hives, while I got only 14 and 13 cts. per lb. for the 4¼x4¼ square sections, and I consider that much difference is worth looking after—don't you? The Danzenbaker hives doubled up, two brood-chambers, are in fine condition, even better than my double-walled hives. I intend to build a bee-cellar and work off my double-walled hives as fast as I can, and get the Danzenbaker hives. Very truly yours,

J. L. Haight.

It is not claimed that so large an advance in price as is mentioned above can usually be obtained for honey in Danzenbaker sections, but because it is more uniformly fancy grade, and of general better appearance it commands the highest prices and a more ready sale in a dull market than ordinary honey.

A RECENT ORDER.

Indianapolis, Ind., Feb. 3, 1904.
The A. I. Root Co., Medina, O.

Dear Sirs:- Please ship to me as soon as convenient: 500 Danzy. AD64M hives. Yours,

Walter S. Pouder.

(This is in addition to all other orders.)

64-PAGE BOOK.

Mr. Danzenbaker's little book, "Facts About Bees," containing 70 pages, giving full particulars regarding this hive and system, is indeed full of facts. If one follows the directions clear through, he is sure to produce a strictly first-class article of comb honey, providing of course there is any honey to be had. This unique little book will be sent free to all who apply for it.

Bee-keepers are raising honey for the money there is in it, or for the pleasure they get out of it. It is conceded by all who have tried this system that it is highly profitable. Reading over letters from the users of this hive who tell of securing large crops of honey almost free from propolis makes us think that the bee-keeper who is in the business for pleasure would be highly gratified with the hive also. What is more satisfying than to take off well-filled supers of snow-white sections free from the propolis that is so often found on sections in cases that are poorly constructed and adapted for the production of a fancy article?

SPECIAL NOTICE.

The great popularity of the Danzenbaker hive has brought the shallow brood-frame and the tall plain sections into prominence. It must be remembered that no other hive contains the essential features of the Danzenbaker. The success of this system depends on having everything just right, so you should place your order for the Danzenbaker hive with our main office, or any of our branches or regular agents.

THE A. I. ROOT COMPANY,

BRANCHES: Main Office and Works, Medina, Ohio, U. S. A. BRANCHES:

CHICAGO, ILL., 144 East Erie St. | SYRACUSE, N. Y. | ST. PAUL, MINN., 1024 Miss. St. | San Antonio, Tex., 438 W. Houston.
MECHANIC FALLS, ME. | PHILADELPHIA, PA., 10 Vine St. | HAVANA CUBA, San Ignacio. | Washington, D. C., 1200 Md. Av., S. W

(See list of Jobbing Agents in American Bee Journal, Jan. 7, page 2.)

Establisht in 1861

AMERICAN BEE JOURNAL

The Oldest Bee-Paper in America

Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

GEORGE W. YORK, Editor. CHICAGO, ILL., MARCH 31, 1904. Vol. XLIV—No. 13.

Editorial Comments

Care in Foul-Brood Regions.

One of the results of the New York State investigation gives material for thinking over, and helps to explain some things. A sample of *healthy brood*, taken in a vicinity of bees affected with black brood, showed the presence of Bacillus alvei in considerable numbers. For practical purposes it matters little whether the disease in that region was black brood or foul brood, if Bacillus alvei is the culprit in both cases. The point of emphasis is that Bacillus alvei may be present without being detected by any ordinary means. How can that be?

Scientists tell us that formic acid in the form of vapor is constantly exhaling from combs out of which young bees have lately emerged, temperature and robustness of the colony favoring such development. Also, that where formic acid is present in sufficient quantity the spores of Bacillus alvei can not germinate. This helps to account for the fresh breaking out of disease at times where it has been supposed to be eradicated, and for the belief of some that carelessness, chilled brood, etc., may produce the disease. It also accounts for the apparent disappearance of the disease when a colony becomes strong and active in the harvest, only to break out later on.

The moral of all this is that in all cases, and especially in regions where disease is present, it is of first importance to keep colonies strong and in good condition at all times.

The National and Its Increasing Work.

From a letter recived recently from General Manager France, it seems that the National Bee-Keepers' Association is to be kept very busy with various kinds of trouble for some time. Among the cases on hand and in prospect are the following:

A complaint from Colorado about bees causing pear-blight.

In New York, a suit before a Justice of the Peace as a result of a little neighborly spite-work.

In Canada, trouble caused by bees soiling clothes on a neighbor's wash-line.

In Minnesota, bees soiling clothes and stinging neighbors.

In California, 60 colonies of bees burned by a neighbor, who then refused to pay the damages to the bee-keeper; honey stolen, and the guilty parties and the honey found—prosecution to follow; and a case of honey adulteration.

The New York horse and bee case was decided in favor of the bee-keeper, the owner of the horse to pay the witnesses and court costs. The attorney's fees paid by the National in this case are $55.

If troubles continue to multiply, it will be necessary for the National to have a general manager who can devote most of his time to its interests. It will be necessary to pay a larger salary for such services than at present. The fact is, that no one can afford to do the work of the general managership on the small salary that is paid at present. The Association could well afford to pay the right man a good salary for devoting practically his whole time to the work. Of course it would be necessary to develop a number of lines that are not now followed up at all. In order to do all that might be done through the Association for the benefit of the bee-keepers, it would take considerable money, but we believe that after bee-keepers began to see the good resulting from the work done by the Association, they would be glad to pay all it would cost.

Perhaps some day the Association will be strong enough, and wise enough in its management, to take hold of the many great subjects of vital interest to bee-keepers, and push them to a successful end. Much excellent work has already been done, but there is a growing demand for a larger service in the interest of honey-producers. The National Association should take the lead in this work. We believe it will do so, in due time.

Artificial or Corn-Juice "Honey."

Several of our subscribers have lately sent to us copies of the following taken from such papers as the Philadelphia Public Ledger, the New York World, etc.:

> John D. Rockefeller now makes artificial honey with as much enthusiasm as he formerly pumped petroleum out of the ground years ago. He puts corn into water and boils it with a little sulphuric acid. Then he puts in some lime to neutralize the acid. This forms a precipitate of sulphate of lime. He separates the sulphate from the corn-juice by running the mixture through a filter press. The result is a crude glucose, which so resembles real honey in flavor and color that it takes an expert to distinguish it from the genuine product.
>
> There is one objection to the glucose honey. It retains, no matter how much it is refined, a certain trace of the sulphuric acid. Commission men say they can taste the acid. Chemists declare that the acid rots the teeth. In another generation or two, from this cause alone, they contend, there will be hardly a child with sound teeth.
>
> Mr. Rockefeller is doing his best to get rid of the sulphuric acid. He has offered, it is said, $500,000 to any chemist who can produce glucose from corn as cheaply as by his present process without the use of sulphuric acid, or, at least, acid in the corn-juice.
>
> The crude glucose Mr. Rockefeller dilutes with real honey, puts up in nice-looking glass jars with fancy labels, and sends all over the world. Grocers sell it to the unsuspecting public, and little children eat it with delight.
>
> The crude glucose is used in tremendous quantities to adulterate molasses. There is very little pure molasses in the market since Mr. Rockefeller got into the glucose business. Corn-juice is very much cheaper than cane-juice.
>
> To refine glucose Mr. Rockefeller has it poured into big vats, whence it passes through a charred bone-dust and comes out as a colorless, sticky liquid like glycerine, which is growing more popular every day with bakers and confectioners. They buy it from Mr. Rockefeller in car-load lots, and use it for cheap candy and icings.
>
> Mr. Rockefeller expects to make 1,000,000 tons of glucose next year, or the year after. Some of the distillers say if he keeps on at this rate there will soon be no corn for whiskey.

It seems strange that there can be found men who will try to make people believe that corn-juice as a food is equal to honey gathered by bees. Some time ago we called attention to a thick syrup that was being thrown on the market. Its advertisements told the people that it was "better than honey for less money." Just why any manufacturer should make such a claim as that, when it is not true at all, we can not understand. Any one who has ever tasted pure honey knows that no glucose concoction can ever take its place. It may deceive some people for awhile, but sooner or later they will realize the deception, and then the glucose product will be dropped.

We suppose that it is true that practically every good article in this world is counterfeited in some way or other. It is said that the very fact of a genuine article being counterfeited, is a testimonial in favor of the real article. However that may be, we think it behooves honey-producers everywhere to help along a National pure-food law, which will require the exact ingredients of every new article offered for sale, printed on the label, which label must be on every package placed on the market. It is high time that the American people rise in their might and smite the base adulterators of pure-food products, and those who endeavor to palm off on an unsuspecting public their miserable compounds, which they claim are equal to the genuine article, if not better. There should be a National law which would prohibit the use of the word Honey on any other article but the genuine, as produced by the bees. This, of course, should be made general so as to apply to other articles of pure food. It is a burning shame that manufacturers are allowed thus to appropriate reputable names for their disreputable foods.

There is probably no other class whose interests can be so easily destroyed as that of the bee-keepers, when the name of their pure product can be misapplied and connected with some spurious article and put upon the market, as is being done at the present time by unscrupulous manufacturers.

It has been stated, and we believe truly, that there is no legitimate use for glucose. So far as we know, it never sells under its true name, but must ever be sold under the name of something that is pure and genuine, and that really has a value in the estimation of the public. We do not believe that the American people would purchase glucose in any appreciable quantity if they knew just what they were buying when the glucose is "worked off" on them.

The National Bee-Keepers' Association has a great work to do along this line. We hope that it may soon be in a position to "get busy" and look after these matters in a way that will not only be a credit to itself and bee-keepers everywhere, but will result in inestimable good to humanity. We all must eat. We want to know that we are eating pure food. The very best way, as we see it, is for the National Government to take up this matter and invite the co-operation of organizations like the National Bee-Keepers' Association, and thus compel those who put up and offer for sale food products to label them in a truthful manner.

Lessening the Cost of Hives.

The Rocky Mountain Bee Journal thinks there might be advantage in simplifying hive-construction. It thinks plain, cleated bottom-boards and plain telescope covers roofed with painted muslin are good enough, and that rabbets may be omitted in supers and scallops in bottoms of section-holders. A large number of bee-keepers would be in accord with this, if the saving of cost were sufficient, but there would be division of opinion if a vote were taken upon the motion to discard Hoffman frames for plain, thick top-bar frames. Many would agree in regarding "the Hoffman frame as little less than an abomination," while many others would consider it almost indispensable. But the extreme of condemnation is reserved for the short top-bar with the expense of spacing staples. Editor Morehouse will never get unanimity on that, for just as much as he condemns it others commend it, and would not do without it were the extra expense quadrupled.

Miscellaneous Items

Mr. H. C. Morehouse, of Boulder Co., Colo., writing us March 16, had this to say about the prospects for the coming season:

"You can mark Colorado crop prospects up a few notches. We are getting a tremendous snow-storm to-night and to-day, and the drouth is now broken. Our greatest storm-season (April) is yet to come, and with the start made to-day, I think water is assured. My bees have been gathering pollen since Feb. 22, and the weather is that of May rather than March."

* * *

Two Woodland Pictures have come to us through the kindness of Mr. W. Z. Hutchinson, who is making himself famous as an artist in the line of high-class photography. One of the pictures is called "Michigan's Last Pines," in which the trees stand out almost as though real, instead of a picture on a flat surface. Then, one can look away back into the dimly-lighted aisles, where only once in a while a straggling sunbeam finds its way. Mr. Hutchinson spent a day looking for this particular view, and waited for the sun to be in the right direction, away up in the northern part of the "Lower Peninsula," in Otsego County. He was told, and he thinks it is true, that this lot of pine is the last of Michigan's soft white-pine.

The other photograph is an autumn scene, in which are shown in their natural beauty a grove of tall sugar-maples, with a depth of fallen leaves on the ground.

We suggested to Mr. Hutchinson that these two pictures should be used in one of the leading magazines, with a suitable descriptive article, and thus not only preserve them in a more permanent form, but also give them a wide circulation.

We wish here to thank Mr. Hutchinson for the two beautiful pictures.

* * *

Capt. J. E. Hetherington.—In an appreciative obituary notice in the British Bee Journal, written by the senior editor, Thos. Wm. Cowan, occurs the following:

"We had the pleasure of visiting Capt. Hetherington in 1887, and stayed some days with him. At that time he had 20 apiaries situated at distances of two or three miles apart, in a radius of 12 miles, so that the greatest distance he had to go from home was 12 miles. He and his brother managed the whole of these apiaries, having several men under them. We were there during the hours of business, which commenced at 5 o'clock in the morning, and saw all the working. The men went around from hive to hive, and took off super after super, which, in hives with three stories of sections, were promptly examined and removed, if necessary, and in this way 100 to 150 supers of sections were taken off and carried away."

* * *

Mr. E. E. Hasty, our "Afterthought"-er, when sending the last installment for his department, wrote us as follows:

FRIEND YORK:—

"When shall I hear de bees a-humming
All around de comb?"

Sometime. Ah, presumably, sometime. E. E. HASTY.

Whereupon we at once replied to his question thus, instead of referring it to Dr. Miller:

FRIEND HASTY:—Just wait, and a little later—
You shall "hear de bees a-humming,
All around de comb,"
When from de flowers de bees are coming,
To dere "Home, Sweet Home."

We didn't know whether our answer to his question was the correct one, but considered as an "afterthought" it might do, perhaps.

Convention Proceedings

Report of the Ontario Bee-Keepers' Convention Held in Trenton, Dec. 1, 2, and 3, 1903.

BY MORLEY PETTIT.

The Ontario Bee-Keepers' Association met in annual convention in the Town Hall at Trenton, Dec. 1, 2, and 3, 1903. After an opening prayer by Mr. J. K. Darling, Pres. W. A. Chrysler gave an address, as follows:

PRESIDENT CHRYSLER'S ADDRESS.

I am very much pleased to greet so many of our old and new members that have assembled here.

It might be well to remind ourselves that we are one year older than when we last met. "Time rolls its ceaseless course." The remembrances of past years picture varying degrees in the bee-keepers' enthusiasm.

While we have had, in times past, good crops and fair prices, there have been others where large quantities of honey never reached a profitable market.

While some parts of the Province have not been fortunate in obtaining a good crop this season, there is a surplus in others that is causing some anxiety on the part of the holders.

The same old subjects that we have been discussing in the past meetings are no doubt instructive to all of us in obtaining perfection in our pursuit, but I hope you will not allow them to become the all-absorbing subjects for debate. Let us not lose sight of the most vital subject at present, conducive to the greatest success and profitableness of our industry, which is the marketing and disposing of our honey in our own and distant markets.

The Honey Exchange Committee will present the report of their work during the past year, enumerating their difficulties and recommendations, and I sincerely hope you, one and all, will give your individual interest, and express your views so something will result that will be the means of perfecting the plans already begun for the handling of all the honey that we as bee-keepers can produce.

When such a condition presents itself, there will be such an expansion in the production and exportation that will be as startling as has been in many of our other agricultural products.

Let us also profit, if it is at all possible, by our foreign exhibitions of honey, held in so many parts of the civilized world during the past few years. In all such exhibitions Canadian honey has taken no second place. It is therefore our just claim that Canada produces honey second to none in the whole wide world.

The Executive Committee have made arrangements to collect an excellent exhibit of honey from our members to be displayed conjointly with that of our Dominion Government exhibit of honey at St. Louis, in 1904.

According to the Ontario Government statistics we have in Ontario this year, 207,936 colonies of bees, being an increase over 1902 of about 5400 colonies.

The Inspector of Apiaries has, as for as I have been able to learn, attended to every call made for his services. The applications I have received for the inspector's services, I am sorry to say, have all been late in the season for him to map out his work to have it performed in the least time and expense. Although fast disappearing, I would urge every bee-keeper to give his best efforts to rid the Province of foul brood, and also to observe the law on the subject, especially that of Sec. 10, of the Foul Brood Act, which says:

W. A. CHRYSLER, President.

"Every bee-keeper or other person who is aware of the existence of foul brood, either in his own apiary or elsewhere, shall immediately notify the President of the Ontario Bee-Keepers' Association, of the existence of such disease, and in default of so doing shall, on summary conviction before a justice of the peace, be liable to a fine of five dollars and costs." I think by a strict observance of the above, that foul brood in the Province will very soon be a thing of the past.

I hope you, one and all, will assist to make this one of the most interesting, pleasant and profitable of meetings. As many have come to this meeting from a distance, and at no small expense, it is very important that we employ our every moment in useful and profitable discussion.

As your President, I shall endeavor to judge without partiality upon every subject submitted for consideration, and that I may confidently rely on the members in supporting the dignity of the chair, and maintaining the decorum and orderly demeanor of the meeting.

W. A. CHRYSLER.

R. F. Holtermann—As foul brood has been touched on rather freely by the President in his address, it might mean by passing without comment, that we agree with all that has been said. I might say that portions of this matter will come up in the order of business, and can be taken up there.

Mr. B. O. Lott read the following paper:

THE ADVANTAGES OF OUT-APIARIES—HOW, WHEN AND WHERE TO MOVE THEM.

In choosing this subject from among the many which we might probably discuss at this meeting, I made this choice, believing that, generally speaking, bee-keepers have had little experience with out-apiaries.

First, I shall reverse the order upon the program and ascertain if near your home apiary (I use the word "near," for I consider it very important for spring building), you have a good supply of willow, soft maple, alder, poplar, hard maple, honeysuckle, moosewood, wild plum, bilberry, and other spring flowers. If so, there will be no necessity to move early in spring. If not so fortunately situated, then select a locality along the lines I have mentioned, where there are also plenty of orchards, and, if possible, raspberries, clover and linden.

HOW TO PREPARE TO MOVE.

First, a hive for moving should not have iron or tin strips for top-bars to rest on, but should rest on wood, as the bees will propolize more quickly to wood than iron. Next, it will be necessary to have screens for the tops of the hives. These are made of 1¼-inch strips, dovetailed at the ends, made exactly the size of the hive, with wire-screen cloth for covering. These can be fastened by four small wire nails to the top of the hive, then fasten the bottom-board with whatever fastening you may have. I prefer the Van Deusen clamp. Put on the entrance-sticks, and they are ready to move.

I might also add here the reason we prefer the clamps. Moving in July or August you can remove the bottom-board, and with a screen the same as the top screen, with screw nail on each side. Place the screen beneath the hive, with the screen-cloth next to the hive, fasten down the clamps, and they have ventilation at both top and bottom.

WHEN TO MOVE.

In the old settled part, such as Prince Edward and the southern parts of Hastings, Lennox, Addington, Northumberland, and Durham counties, linden is something of the past, while in the northern parts of the same counties linden is quite plentiful. Following the plans which I have already mapped out, with several railways running from south to north, and with good wagon-roads, it is a simple matter to move an apiary 50 or 60 miles without any loss whatever. We have learned also by experience that in placing hives in cars for shipment, always place them so that the frames hang lengthwise instead of crosswise, whereas shipping by wagons the reverse position is necessary.

We bee-keepers in Hastings ship our bees north for linden and clover, south to the county of Prince Edward for buckwheat honey, and home for winter quarters. By following this course we usually get a fair crop of clover, linden and buckwheat honey.

Time will not permit me to go into all the details of moving, but I trust enough has been shown to clear the way for any new or old bee-keepers situated in a locality where there is not an abundance of clover, basswood and buckwheat, and other honey-producing plants.

B. O. LOTT.

Mr. Holmes, who had been selected to open the discussion, began by saying he had not worked in out-apiaries, so could not offer any suggestions from experience. He thought it an advantage to have apiaries scattered so that a failure in one place would be compensated for by a good crop in another. He also considered it very important to have store-rooms as well as extracting-houses at all the yards, to avoid hauling home in the busy season.

A member asked Mr. Lott if he had a full outfit of machinery at each yard. He was also asked whether he found it possible to get locations where extra rainfall made the moving profitable.

Mr. Lott said that as he had no communication with the power which made the rain, he could not be sure on that point. He usually took the whole outfit when he moved a yard.

J. B. Hall—Will the gain in taking off the tin frame-rests counterbalance the trouble of handling the frames when they are glued fast, as they will be?

The majority of those who spoke agreed with Mr. Hall that it would not.

Mr. Post could see no advantage either way.

Mr. Holtermann remarked that it was best to hear from men of large experience on these subjects. He had found that with the metal rest and space above the frames the latter were liable to shift in moving; but with the space beneath the frames the rim of the queen-excluder, or the super or cover, as the case may be, would press on the ends of the top-bars in such a way as to hold them firmly in place. He had moved hives for miles on wagons, over all sorts of roads, without the full number of combs, yet they never stirred.

Mr. McEvoy—Would it pay to ship bees, say 200 miles, to get a better location?

Mr. Lott—Yes, if you could be sure beforehand that you would get a crop there and not at home.

Mr. Post—It is all luck and chance as to the profit in moving bees for pasture. I have moved bees 40 miles this year and last, and got nothing. Next year I might get six tons.

A member asked if it would be all right to move without fastening the frames if they are self-spacing, and have the bee-space on top.

Mr. Holtermann—It won't do if you have a proper self-spacing frame. You can't afford to use the Hoffman frame; but if you take a straight top-bar and drive two staples in each one at each end on opposite sides, letting them project a quarter inch, you have a self-spacing frame which has not the disadvantages of the Hoffman. I got this idea from Morley Pettit. Now have a bee-space below the frames, and the top-bars are held firm, and the frame can not swing.

Mr. Hall—If the hive is full of brood-combs fixed by burr-combs, there is not much danger of them stirring. It always pays to move bees to buckwheat. I can't agree at all with taking off metal frame-rests.

Mr. Lott said he was still satisfied with his plan in spite of the opposition of other good men.

Mr. Pettit—Just a word with reference to burr-combs. Of 205 colonies put away for winter in 12-frame hives, I feel safe in saying there are not 200 burr-combs. We have our top-bars the proper width, and not too deep, and properly spaced, and *we do not have burr-combs*—could not be bothered with them; prefer a staple-spacer. As to the staple interfering with the uncapping-knife, we hold the comb with the staple at the top and cut down from the staple. If you are in the habit of cutting upward, put the staple at the bottom, and you are cutting from it still. I have had long experience with loose-hanging frames, and then with staple-spaced frames, and I could not keep bees without the latter.

Mr. Armstrong preferred the Hoffman. He could handle three combs at once. Moving to buckwheat was very uncertain.

Mr. Pettit—As to spreading out on account of varying seasons, it's like this: Say this year you have a good crop here, and none 50 miles away. Next year it may be reversed. Now, if two yards are placed one here, the other there, you get a crop from this yard this year, and one from the other yard next. But suppose both yards are here—you have a crop from two yards this year, and no crop next. In either case you have the same amount of honey in two years, and in the latter case we saved the extra traveling expense.

Mr. Darling said he had never moved bees by train, but would recommend fastening the frames by two strips, one tacked on the frames at each end of the hive.

Mr. Byer—In moving bees you must always consider the chance of getting no honey when you get there.

Mr. Pettit—At conventions there is considerable arguing at cross purposes. Our systems vary, and to be really understood one must explain one's whole system, almost. Now the matter of fastening frames for moving resolves itself into two questions: Is your bee-space below the frames or above them? If below, the pressure of the super, excluder or cover, makes other fastening unnecessary, provided the frames are self-spacing. If the space is above the frames, the latter must be fastened by means of strips, or something of that sort.

R. Lowey—How would you prevent swarming at out-yards?

Mr. Sibbald did not see much advantage in cutting out queen-cells.

Mr. Hall—If they should decide to swarm at buckwheat, why, let them go.

Mr. Holtermann—I wouldn't like to get along without going through the brood-chamber once a week, but of course there is a difference in locality.

Where fruit-bloom is separated from clover by a period of no honey, then clover from basswood, and basswood from buckwheat by the same, the swarming problem is very simplified. But with a continuous flow from beginning of clover on, what can we do? It is a lot of work to go through brood-chambers, but I do not know any way out of it.

Mr. Hall—We have the continuous flow, and must go over brood-chambers in the way described. If we find a cell with an egg, we take away all the brood.

Mr. Darling had never succeeded in preventing swarming by breaking down cells, except in the case of after-swarms, when it works well.

A member described a unique method of wintering bees, viz.: In cold-storage, where the temperature is kept uniformly at 37 to 40 degrees, Fahr.

(Continued next week.)

Contributed Articles

Bait-Sections and Their Profitable Use.

BY G. C. GREINER.

It is a well-known fact that there is hardly a single feature connected with the management of bees, on which all bee-experts agree. The use of bait-sections is one of these features, and it may not be out of place to make a few remarks on this subject.

A writer from Texas says in one of our leading bee-papers: "I do not like bait-combs in the supers. The bees will finish these sections and stain them before the sections that had only foundation are finished."

I agree with the writer exactly, except that he places his argument on the wrong side of the fence. He does not say whether he uses them or not, but I should infer from the way he expresses himself later on, that he does not. The reason why he objects to bait-sections is just the reason why we bait-section advocates consider them so valuable. To be sure, bees will stain them (if we allow it), and that they begin to work in them long before they work on sections with foundation only, and that is exactly what we aim to accomplish by the use of bait-combs. As objectionable as stained sections may be, I am willing—and undoubtedly almost everybody else would be—to be troubled with them as long as they are an extra gift, and how many unstained sections are thrown in with this gift, on account of the induced earlier work in the supers by those bait-combs, we don't know.

But if these stained sections are so very objectionable, why not prevent them from getting so? I admit that sections with last year's drawn-comb will never look as nice and clear as those newly built in the height of the clover or basswood honey-flow, but if we use the comb-leveler thoroughly, so that the surface part of the comb is new wotk, their appearance will be greatly improved. And then, we need not let them remain where first placed until they are stained. A little time expended at this time is, I think, well invested. As soon as the colony has nicely started in these bait-sections, they should be moved to the other part of the super. If a row or two has been placed in the center, as I generally practice, they should be exchanged with some side-rows, bees and all. In this way all work in those already well under way is retarded, while the empty ones, or those with foundation, being moved to the place where the incoming bees have been accustomed to unload, are soon in prime working order. Managed like this, they are all finished nearer the same time, and no great harm is done by staining.

One main reason why some bee-keepers are not in favor of using bait-sections is, they are not particular enough to care for them properly. Unfinished sections that are intended to be used for bait-sections next spring, should not be left standing around, exposed to daylight, dust, flies, spiders, etc., and perhaps more or less honey left in until it is time to use them. When the honey harvest is over, and the supers are all gathered in, it is one of my first jobs to sort out the bait-sections for the next year. Anything from a drawn starter to a full-built comb is included in this class. Any sections that are capped about one-half or more are kept for home use (the table), but those with less capping are reserved for next year's baits. All the latter, and those combs that are drawn out to full thickness, receive a comb-leveler treatment, after which they are again placed in supers and set out-doors to be cleaned out by the bees. To be on the safe side and excite the bees as little as possible, I always have an empty hive placed a little way from the apiary, on which I set these so-prepared supers, frequently a half-dozen at a time. The hive-entrance is reduced to nearly single-bee passage; this has a tendency to prevent the bees from gnawing and tearing down the combs, and the cleaning out is done in a more quiet way. I have never had any case of robbing caused by this procedure. As soon as the bees stop flying to this hive, the sections are all cleaned out and ready for storage.

When the honey-house, shop, or whatever place these sections are stored in is used as a work-shop during the winter, more or less dust is the natural consequence. To protect them and keep them as clean as possible, all supers containing them should be stacked up in snug, tight piles, and the top-ones covered up, the nearer dust-proof the better; and this holds good with all the empty supers, as well as with those that have been refilled with new sections.

In connection with the foregoing, the question may be asked: What part of the honey-crop is due to bait-sections? As it is impossible to use and not use bait-sections with any number of colonies at the same time, the question can not be answered even approximately. To test the matter in different seasons, or with different colonies—that is, use bait-sections one year and none the next, or set aside an equal number of in every respect equal colonies, with and without them—would not give reliable results, for we all know that all colonies under apparently the same condition will not always work alike. But one thing we are sure of: At the last gathering of our supers we have repeatedly found some, especially in seasons of light honey-flows, that had all their inserted bait-combs transformed into finished honey, while the rest that had only foundation starters large or small, had not been touched at all, and this can only be attributed to the use of bait-sections.

There is still another point, which I wish to mention: No matter how thorough and painstaking we have been in the spring management of our colonies, there are always some that are rather slow to take to their sections when the honey-flow begins. Knowing that it is the early start that counts at the end, I have many times induced these less ambitious colonies to make a start by exchanging their empty bait-sections with those already filled from more industrious ones. Like changing from the middle to the side rows, as spoken of above, it is desirable and necessary to move as many adhering bees as possible with the sections, and the less smoke we use the less our bees are excited, and the better we will succeed in this operation.

A drawing and description of my comb-leveler I will furnish later on.

Niagara Co., N. Y.

"Keep More Bees"—Is this Doctrine the Correct One?

BY G. M. DOOLITTLE.

On page 99, I find these words: "In place of spreading brood and stimulative feeding in spring to increase the number of bees, E. D. Townsend says in the Bee-Keepers' Review, that it is better to have a few more colonies and avoid the extra work. The point is worth considering."

That "the point is worth considering" is what leads me to say something on this matter, for I believe there is an element in it which the advocates of such a doctrine have not take into consideration. This idea of Mr. Townsend is not entirely new, for I have noticed for some time that the idea was obtaining with some bee-keepers that more money is to be made from the apiary by keeping a large number of colonies and letting them largely take care of themselves, than there is by keeping a less number and properly caring for them.

Not long ago I received a letter from one of our apiarists, who said he that he was going to keep more bees than he had formerly kept, and do less work with them, for he believed that double the number of colonies would give him fully as much, if not more, honey than he had been getting, even if he did not manipulate them at all. He said that he believed the system of management used by many in securing large yields from individual colonies caused a greater amount of labor and manipulation than there was any use of, and henceforth he should adopt exactly the reverse from the plans he had formerly been using, and put more bees into his field, so that he would get the same amount of surplus as before with very little labor. All that would be required would be the investing of a little more capital in shape of hives, etc., and that the "good management plan" would soon be a thing of the past. I have not given the exact words of the letter, but I have given the substance, very nearly, if not quite.

The reader will at once see the sentiment of this letter is nearly, if not quite, identical with that expressed in the quotation from Mr. Townsend at the beginning of this article. As these views come from persons of no mean degree in bee-keeping, it behooves us to consider the matter very carefully, as Editor York suggests, and if those of the past have been on the wrong track, to get over on the right one as soon as may be.

After carefully looking the matter over, and experimenting to quite a large extent for the past few years, I believe that there is one item at least, regarding these extra colonies, which the advocates of putting more colonies into the field forget, or one entirely ignorant of, the same being great enough more than to pay for the extra manipulation they seem so anxious to get around, so that the investing of capital in more hives for the extra number is worse than thrown away.

The item I allude to is that each of the extra colonies put in the field in order to secure the honey-secretion from a given area with but little or no manipulation, or to "avoid the extra work," as Mr. Townsend is quoted as saying, costs quite a large proportion of the product of our field; and if we carry the matter far enough along this direction of putting in a "few more colonies," it will cost us *all* of our product, except in the most favorable years.

Not long ago I saw a statement in print from quite a noted bee-keeper, that it took 200 pounds of honey to carry a colony of bees through a single year. This is a greater consumption of stores during the year than I had believed possible. My estimate has been that 100 pounds is sufficient for all the needs of any single colony during a year, and so to be on the conservative side I will call my estimate, or half of what the writer gave, as the amount needed to keep one colony of bees one year, as the right amount. Then the question which comes to us is this: Which is the cheaper, a little extra manipulation, or the extra colonies, hives, etc., and the *honey* that they consume?

Suppose that 100 colonies produce an average yield of 50 pounds each of surplus honey for their keeper, and by so doing secure all the nectar in a given field, year by year. This will make 5000 pounds of surplus as the apiarist's share of the field, while each of the 100 colonies will use 100 pounds each, or 10,000 pounds as a whole, as their share to carry them through the year. Thus we fail to secure to ourselves only a one-third share of the honey from our field, by employing an extra number of colonies.

On the other hand, if we employ the management or economy plan, which many of our best farmers do, and the plan adopted almost universally by our English friends—that of securing the same amount of produce off of *one* acre of land that many of our Americans do from three or four acres—we shall find our question stated thus: 15,000 pounds is the product of our field; 50 colonies are all that are needed with good management to secure this whole yield. Then 50 colonies must use 5000 pounds of this for their support, thus leaving 10,000 pounds for the manager. None but the most prejudiced can help seeing from this that the manager gets 5000 pounds of honey for his manipulation, and uses little if any more time than he would use on the 100 without manipulation; hence from the standpoint of overstocking a field, the *management plan* is 5,000 pounds ahead of the other plan of keeping an extra number of colonies, and proves that Mr. Townsend's doctrine is not correct.

And the same holds good, be the number kept great or small. A man can care for one-half the number of colonies on the management plan as *easily* (according to my way of thinking) as he can for double the number as proposed by my correspondent, and Mr. Townsend; and this one-half will give the apiarist better results in dollars and cents than will the whole cared for in the slip-shod way that colonies are generally cared for when worked on the "let-alone" plan, and save the extra honey consumed by the extra one-half of the number of bees, as clean gain to the bee-keeper. *All* of the work done with the "larger number of colonies" is the *harder* part of bee-keeping, such as carrying the hives and colonies to and from the cellar, moving them to out-apiaries, etc.; while the manipulating part is of an easier nature.

Just compare sitting beside any colony and handling the frames, as in spreading brood, to the heavy work of lugging hives full of honey to the cellar, or hauling the same from the out-yards, and you will catch a glimpse of what doubling the number of colonies, instead of manipulating one-half the number, means.

When viewed in this, the *true* light, Mr. Townsend's advice to "have a few more colonies and *avoid the extra work*" (Italics mine), sounds very strange, and as the Editor well says, "The point is worth considering." I hope the readers of the "Old Reliable" will consider it well before they leave a correct doctrine for one which can only prove incorrect.

And in conclusion allow me to say that the above is not mere fancy, but facts which the success of the two plans has proven in my hands, and which will be obvious to all who have closely watched the reports in our various bee-papers during the past. If any reader has any doubts along this line, let him try the two plans side by side till he or she is convinced. Make a careful test of the matter—one-half of each apiary by each plan. Don't make the mistake most do—that of running the *whole* apiary one year on one plan, and the whole thing the next year on the other plan; for the years vary so much that nothing definite can be arrived at in that way. Onondaga Co., N. Y.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Vaseline to Prevent Propolis on Fingers.

Mr. E. H. Beardsley writes: "Did Miss Wilson ever use vaseline on her hands when she scrapes sections? I tried it and liked it very much; also when putting foundation in sections my fingers get stuck with wax and bother me. I keep a bottle standing near and put a little on the ends of my fingers. It does not keep the gum off, but I think my hands do not get so sticky."

I usually scrape sections when the weather is quite cool, so I have not been bothered with propolis sticking very much. I have never tried the vaseline, but I should think it would help materially in keeping the hands free from the *sticky stuff*.

Management for Chunk Honey.

I have seen chunk comb honey mentioned lately, and would like to know how to manage from caring of the bees to putting it on the market. I would like to know what hive is best, what supers, frames and foundation to use, or any other particulars concerning it.

Humboldt Co., Iowa. Mrs. Adella Packard.

There is no special management needed to produce chunk honey. Just give your bees frames with starters. When filled you can cut the honey from the frames (leaving enough for a starter if you prefer). Now cut in pieces small enough for the receptacle you wish to pack it in, using either glass or tin. After packing in the pieces, fill up the empty space with extracted honey, and it is ready for market.

Doubtless a Case of Bee-Paralysis.

Please tell me something about the diseases bees are troubled with. I have one colony of Italians which were quite strong last November, and had plenty of honey, but they have gradually dwindled until there are only about a quart of solid bees left. They seem to be suffering from some kind of disease, for I find handfuls of them outside nearly dead, very much swollen, as if distended with honey, and so weak they can not crawl or fly, but trembling, and their wings have a quivering motion. I found some of them in that state clinging to the top of the frames and cloth, and down on the bottom-board. Yesterday, when going through them, I discovered their queen had died of the same disease.

Could you kindly suggest a remedy, and whether it would be wise to unite them with another colony, let them die out, or give eggs and brood and let them rear another queen? I feel hopeless about them, for I don't know what to do. During the heavy rain the moisture from the hive caused mold to form on some of the frames and sides. Would that injure them? Martha White.

Los Angeles Co., Calif.

Pretty surely you have a case of bee-paralysis, a disease that causes no great anxiety in the North, but is sometimes a very serious matter in the warmer States. Many remedies have been offered, only to prove lacking upon further trial, but Mr. O. O. Poppleton, who is very good authority, says he has made a thorough test of sulphur and found it successful. He gives particulars for the treatment in the American Bee-Keeper, as follows:

> I always go to the colony I am to treat during the day, and take away all the combs that contain brood; or, at least, unsealed brood or eggs, and give to some other colony; then, in the evening, as soon as the bees have quit work and are all home, I proceed to dust sulphur over every comb in the hive, and, if possible, on every bee in the hive. I never measure the exact amount of sulphur used, but suppose about a teaspoonful to every three or four combs in the hive.
>
> I do the work by taking what sulphur I can hold between my thumb and first two fingers and dusting same over first one side and then the other of each comb, bees and all; also over any collection of bees there may be off the combs in any part of the hive. My aim is to have a thin dusting of the sulphur over every bee and every comb in the hive. The thinner the dusting the better, so it reaches everything in the hive. The next day, after doing this dusting, I carry back to the hives the same number of combs and brood as I had taken away.
>
> The reason for taking away brood before dusting the combs, and returning again afterward, is because the dusting of combs not only kills all the unsealed brood in the combs, but ruins these same combs for brood-rearing.
>
> For a week after dusting a diseased colony with sulphur, fully as many or more bees will be dying as before the dusting; and this fact may lead some to think the "cure" is not a cure. It will take a couple of weeks before one can tell whether the treated colony is cured or not.

A Sister's Experience With Swarming.

Please, may I come in and chat a few minutes? I want to sit by that new sister and learn some more about bees and bears. I will tell what a time I had with one swarm of bees last season. It was a swarm of Italians, and made me rather nervous, as I had never hived a swarm alone, but I was "in for it," as the men were not at home. So I donned my mask and gloves, got a pail of water, dripping pan and wing (as I use a turkey wing for a brush, and the pan to take them up in if needed); last but not least was the hive. So you see I did not forget that, if I was young and green at the business.

I set the hive as near as I could to them, shook them off, and succeeded in getting part of them in, but all left in a little while and went back to the old hive. Well, my feathers fell. It was a sorry dose for the first, but the next day was the same. The next day my husband helped me; he thought he had them sure, but not so, the contrary little things went back to the old home. Next day, promptly at 11 o'clock, they were, as usual, on parade almost to a minute, but we were at the swarming, moved the old hive and put another there, and hived, or tried to hive, them. They went back, but we had the laugh on them. We found the queen and put her in, and they stayed and stored a fine lot of honey. It was a fine swarm. I am sure experienced people will laugh, and say, "That is my experience." I think experience a good teacher, but sometimes a very hard lesson.

Lampasas Co., Tex Mrs. Mellie Lowe.

Bees Humming in the Cellar.

The question is asked by "Iowa," on page 10 (1903): "Do bees always keep on humming in the hives all winter when in the cellar?" Bees always hum when in the cellar 24 hours before a storm, and the more severe the storm the louder they hum.

Now, I would like to hear from some of the rest of the good bee-keepers on this subject.

Poweshiek Co., Iowa. Catherine Wainwright.

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

EARLY OR LATE MARKETING—DOUBLE-TIER CASES.

One of the times when we want to put in a denial, only we fear it's perfectly true, is when W. L. Porter says the man who gets his crop all in late will get the minimum price. Well, how about the man who says, "Don't demoralize the market! Wait a little. Nothing gained by such awful rushing"—and is himself the most frantic rusher?

Surprised to hear Mr. Porter say that the double-tier case is coming more and more into favor again. Though its coffin had been forever nailed by the paper tray and no-drip feature of the shallow case. Page 103.

INFERIOR SWEET CLOVER HONEY FROM UNRIPENESS.

W. D. Harris, page 108, seems to hit the mark when he intimates that the inferior quality sometimes charged against sweet clover honey is mainly because it is not allowed to ripen fully on the hive. His own sweet clover honey he calls good.

EGGS AND BROOD AT SWARMING-TIME.

E. J. Babb suggests that a colony which has sent out a heavy prime swarm often loses pretty much all its stock of eggs, and some of the young brood, because they are, from being so few in numbers, totally unable to feed so many brood as are left on their hands. Is this correct? I am inclined to think it is. It is a common opinion that such colonies are contrary about accepting queens or cells; and I think it's just this overwork at breeding that makes them so. Page 109.

ECONOMY IN FRAMES, ETC.

I see W. A. Moore makes his frames of lath, and his wire-embedders of superannuated clock-wheels. There is a style of man that would buy his breath already breathed than breathe it himself were it possible to do so. The above plainly shows that Mr. Moore is not that kind of man. Page 110.

IMPORTS AND EXPROTS OF BEE-PRODUCTS.

And what is there to afterthink about the exports and imports of honey and wax for the last two years? The United States is not apparently doing very much at either. Self-contained country as to bee-products. Official price of honey pretty low in 1902—33⅓ cents a gallon—less than 3 cents a pound. Improved in 1903 to 40 cents a gallon—still quite a bit below 4 cents a pound. The movements in honey for the two years nearly balance, 136 car-loads coming in and 143 car-loads going out—providing we call 20 tons a car-load. But of wax we are evidently importers, the exports being incidental. One train of 23 cars would bring in our two years' import of wax, of which we would keep 18 and send 5 out again. Page 115.

"LONG-IDEAL" HIVE AND THINGS.

And "long ideal" hive is the way we must "spake it" now! Whenever I meet that phrase something within me will up and say that there is something logically absurd and bad about it—worse than "long idea" hive which it displaced. How can any ideal be long, or have dimensions of any kind? Does it not compare pretty well with long perfection, long notional, long beauty, or long eureka, in getting together incongruous words and rubbing one's sense of propriety the wrong way? Page 115.

APPLICATION OF FORMALIN GAS.

Formalin gas fails to cure foul brood because the box used is too tight, eh? I don't exactly love to be impolite, but it seems to me Mr. J. E. Johnson is treating us to a sample of fine and well-ripened nonsense just this one time. Page 115.

A KINK IN QUEEN-REARING.

The Hewitt plan of defending minute larvæ against rough usage at the outset seems to me to be a valuable queen-breeder's kink. Transfer twice—first time using big fellows only intended to be thrown away. Not being a queen-breeder myself, I nevertheless venture to guess that the sooner the permanent inhabitant of the cell is put in the better—only being sure that the bees themselves have actually accepted the cell and are putting royal jelly in it freely. Page 115.

THE "LEWIS NUMBER."

And so the G. B. Lewis Co. used 800 car-loads of lumber last year. Like a colony of bees we may be small individually, but in totality we are great. Most of us, if afflicted with manufacturing on the brain, would think of buying half a dozen trees, and getting a dozen wagon-loads of lumber sawed out—and then where would we be at? The pictures (in what might be called the Lewis Number) show plainly that that firm put up their factory for business—not wholly to make it what the Irishman said the Hoosac Tunnel was to be, an "ornymint" to society. Page 117.

ONE OF THE SISTERS.

How bloodthirsty of Sister Austin to wish her evening visitor dead! And yet some one would have us understand that all the sex (e'enymost) are waiting to "to bear and forbear"—well, with bears! Page 121.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Feeding Sugar Syrup.

1. Will sugar syrup, after being a month in an extractor, covered with muslin cloth, harm the bees?

2. How will it keep the best, cooked or uncooked? INDIANA.

ANSWERS.—1. No.

2. Cooking makes no difference; sugar is thoroughly cooked in the making, and all that you do in making it into syrup is to unite water with it. The thing you probably have in mind as to its not keeping is its granulating, and it will very likely granulate if it stands a month. It will keep it from granulating if you add a level teaspoonful of tartaric acid for each 20 pounds of syrup, previously dissolving the acid in a little water. Still better, put in a pound of extracted honey for each 5 or 10 pounds of syrup.

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Bee-Books—Buckwheat—Queen-Excluders.

1. Is there any better book than "A B C of Bee-Culture?" If so, what?

2. Is silverhull buckwheat any better than Japanese buckwheat? The former stays in bloom longer, so it is claimed.

3. Would it be all right to use a queen-excluder on the entrance to keep a new swarm from deserting its hive?

4. Will the bees build comb behind a follower if more than ¾ of an inch from the wall? ILLINOIS.

ANSWERS.—1. While there may be no better book, it may be a desirable thing to add to your knowledge by having such books as Langstroth and Cook.

2. There is probably no advantage in any other direction. It is certain that silverhull stays in bloom longer?

3. Yes, unless it should be an after-swarm with a virgin queen, in which case it would not do to keep the queen in too long, lest she might not be fertilized.

4. Not unless badly crowded for room, and then not unless a good deal more than ⅜.

◆

Possibly Laying Worker—Getting Increase.

1. Last fall I had 4 colonies of black bees in Langstroth hives (8 Hoffman frames). Hive No. 4, however, had only 5 frames filled, it being a late swarm, but as they seemed to have plenty of stores I thought they would winter all right. In the latter part of December I purchased 6 colonies of black bees in old-fashioned box-hives, or "gums," intending to transfer them in the spring. On Jan. 9 I noticed great excitement in front of box-hive "F," bees fighting, and lots of dead bees in front; all other colonies seemed quiet. I closed the entrances to all the hives and soon the trouble seemed over. I took it for granted that "F" was attacked by robbers, and by closing the entrance of course stopped it. On looking over my hives on Jan. 15, however, I discovered hive No. 4 (the one with only 5 frames) to have died out; about 20 or 30 dead bees lying on the bottom-board, the rest all gone; still, each of the 5 frames had a strip of sealed honey 2 or 3 inches wide next to the top-bar. Is it likely they left their hive and tried to unite with box-hive "F" on the 9th, and were killed in the attempt? and what should have induced them to do so?

2. I gave the 5 frames with what honey there was in them to colony No. 3. Feb. 13 I was surprised to see some drones flying in front of hive 1. I opened the hive and found abundant stores, and in 2 frames

a patch of drone-brood as big as the palm of my hand, but not a sign of worker-brood. I mentioned this to a bee-keeping friend, and he warned me to be on the lookout for a laying worker. On Feb. 24 I again examined this hive, and found the drone-brood nearly all hatched, but no more young brood coming on, and still no sign of worker-brood. Acting on my friend's suggestion, I began to look for the queen, but could not find her. To make sure, I removed the hive and set a new hive with new frames of drawn comb and some stores in its place, and put an Alley drone-trap on the entrance; now I shook all the bees off the frames in front of the new hive; they went in, leaving 20 or 30 drones outside and no queen, which proved the theory of a laying worker to be correct. I put a cover on hive No. 1, with a hole 10 inches square cut in the center, and over this hole I tacked a piece of mosquito-netting, and then set one of the box-hives over this hole and closed the entrances of both hives with netting. I intend leaving them that way 48 hours, after which I will take the netting away and let them unite. Do you think they will be all right? If not, what will I do to get rid of of this laying worker?

3. This leaves me with practically 8 colonies, counting hive No. 1 and the box-hive on top as one. I want to increase as much as I can with safety, and would like to have 20 colonies by next fall. Please tell me how to proceed. I intend Italianizing this spring.

Feb. 25 I noticed bees coming in with pollen. ALABAMA.

ANSWERS.—1. Yes, the probability is that your suggestion is correct. It is not certain just why the bees of No. 4 should have deserted their hive; but I have known colonies to leave in the same way from what appeared to be sheer excitement at a time when having their first flight after long confinement.

2. Pardon me if I say that I don't believe that there is satisfactory proof that your theory of a laying worker is correct, if you mean by that that only one laying worker was present, for the probability is that a large number of workers were laying.

Quite likely the uniting will be satisfactory, but you might make it a little safer if, instead of having the hole between the two hives entirely open, you would put paper between the two hives, tearing a hole in the paper large enough for a single bee to pass through, and leaving to the bees the job of tearing away the paper to make the passage large.

3. It is hard to tell just exactly what would be your best plan of increase. Much depends upon circumstances. One way would be the nucleus plan. See reply to "Illinois," page 170. Possibly natural swarming might suit you better. If each colony should send out a prime swarm, and half of them a second swarm, that would increase the 8 to 20. You would be very likely to get at least that increase if you should hive the prime swarms on new stands, leaving the mother colonies in their old places.

◆

Wholesomeness of Honey from Foul-Broody Hive.

Is honey eatable, taken from a hive that had foul brood in it, when the combs are lightly affected? I mean extracted honey. MAINE.

ANSWER.—The bacteria that are so deadly to the larvæ do not injure the human stomach.

◆

What of Bee-Keeping in Oregon?

Is Oregon a good bee-State? How does it compare with other States as a field for apiculture? Also, what are the principal sources of honey in Oregon? OREGON.

ANSWER.—I must confess ignorance, and it may be that some Oregon bee-keeper will answer your questions. Very little, certainly, has been said about Oregon as a honey-State, and that looks as if it were not remarkably good in that direction.

◆

What Caused the Loss—Feeding Old Honey—Alfalfa—Transferring.

1. I am a boy 19 years old. I just started last fall with 15 colonies. During the winter 3 colonies have died. When I examined them I found only about a double handful of bees, the others being chewed up by something. In one of the hives the bees were chewed up, and some were carried out under the hive. The comb was not chewed or destroyed a particle, and there was enough honey to have wintered them, so they did not starve. Now I would like to know what killed them. Was it moths, or mice? If moths, how would you prevent them from destroying them?

2. I have some old comb honey I want to feed to the bees. Would you advise me to feed it to them now? If not, when?

3. I want to make some beeswax. How can I make it? Should all the honey be out of the comb before making the wax?

4. I want to sow some alfalfa for my bees. When should it be sown? and how to prepare the ground?

5. I have some bees I want to put into new hives. What time must I transfer them?

6. What time should bees be placed on their summer stands? ILLINOIS.

ANSWERS.—1. The moths had nothing to do with it; they take warm weather for their work; and I don't know what it was unless mice; if it was mice it's strange they should leave the honey and combs undisturbed.

2. Unless some are in danger of being short of stores so that feeding should not be delayed, don't feed till bees are flying daily.

3. Honey will do no harm, only it will be a loss of the honey. If there is enough honey to make it worth while, put the combs in a stone crock or something of the kind and heat slowly just enough so that the wax and honey will be melted. Then let cool and pour out the honey.

If the combs are very old, you cannot get the wax out clean without something in the way of a wax-press. If you have nothing of that kind, and no solar extractor, you can do very well with a dripping-pan extractor described in "Forty Years Among the Bees," page 307. "An old dripping-pan (a new one would do) has one corner split open, and that makes the extractor. The dripping-pan is put into the oven of a cook-stove with the split corner projecting outward. The opposite corner, the one farthest in the oven, is slightly raised by having a pebble or something of the kind under it, so that the melted wax will run outward. A dish set under catches the dripping wax, making the outfit complete."

4. Prepare ground and sow the same as other clover or grass seed. For the best success the ground should be inoculated with some of the soil containing alfalfa bacteria (which you can obtain from the Illinois Experiment Station, Urbana, Ill.), although it is perhaps as well to use ground on which sweet clover has grown well.

5. In time of fruit-bloom, or perhaps better wait till the bees swarm, and then transfer three weeks after swarming.

6. If in the cellar, not until soft maples are in bloom, and not till the weather seems somewhat settled; if packed outdoors, they must be moved before they fly enough to have the location well marked, say as soon as they fly about once a week.

◆

Bees Storing Honey in Glass Jars.

Have bees ever been induced to deposit comb honey, of their own free-will, in glass honey-jars? If not, why not? CALIFORNIA.

ANSWER.—Yes, indeed; lots of times.

◆

Red Clover Queens.

Does the red clover queen-bees work on red clover? What I mean is, do they gather a good deal of honey from red clover? Have they been seen to work on the plant? CALIFORNIA.

ANSWER.—As a rule the tubes of red clover blossoms are too deep to be penetrated by hive-bees, and yet either because the tubes are shorter than usual, or because they are unusually full of nectar, there have been many cases in which Italian workers, and even blacks, have been seen to work upon red clover, and in some cases important amounts of honey gathered from that source have been reported. Some bees are especially distinguished as workers on red clover, and the queens of such bees are denominated "red clover queens.",

◆

Feeding Colonies in Box-Hives—Enlarging the Apiary.

1. I have a few colonies in box-hives, which are not very strong and I think they need feeding. I have no feeder, and some one told me to make a little trough, fill with honey, and shove it in at the entrance. Would this be all right? These bees are in the cellar, and I do not like to disturb them at the top.

2. This is in northeastern Iowa, and the principal honey crop is white clover, which lasts throughout June and July. Will this give honey-flow enough to make bees profitable? There are no bee-keepers near here, and I am trying to get all the advice I can. I have but 3 colonies. Would you advise my purchasing more? IOWA.

ANSWERS.—1. Yes, only in some cases the bees will not come down. If you have some way to warm the cellar for the special occasion it will help, or you may get them down by blowing in the entrance.

2. Yes, bees may be quite profitable with white clover alone as a surplus crop.

◆

Criss-Cross Combs in Brood-Chamber—Burr-Combs.

1. I have purchased two 10-frame hives, chock-full of comb and bees. I tried to look for the queen, but the vertically wired frames were all built in a solid mass, and it is impossible to get one frame out without breaking a piece from one next to it. I pried off two frames and broke a piece of the third frame. The comb was running through both frames. I like to get control of the bees and clip the queen's wings. What would you advise me to do in this case? Let them swarm naturally? or put supers on? Plum, pear and peach trees are in bloom. Would it be advisable to cut out the crooked combs or change the frames?

2. How can I prevent burr-combs? FLORIDA.

ANSWERS.—1. Put supers on as soon as needed, then let the bees swarm, and 21 days after swarming you will find a good time to straighten the combs, there being no worker-brood in the way. If the bottom is not immovably fastened to the hive, turn the hive upside down, and with a long-bladed knife or a saw separate the combs from the sides of the hive, and then lift off the hive from the combs. That gives you a fair chance to see what you are doing, and from what you say about the combs it is likely that you can with a little cutting get every comb by itself, pressing the comb into the frame and tying a string around it, then putting it in the hive. A little care will brush the bees out of the way, and after you get one comb back in the hive you can brush into the hive the bees from each comb as fast as you take it out.

2. You cannot prevent burr-combs entirely, but you will get along with a minimum if you will avoid too large spaces wherever burr-combs are likely to be built—don't have spaces more than ¼ inch.

◆

Feeding Unfinished Sections—Black vs. Italians—Transferring.

1. I have lots of unfinished sections left over from last year. Should my bees get short of stores how would it do to put a super of unfinished sections on each hive?

2. Should the sections be left on when the honey-flow begins, or will the bees darken them so that they will be unsalable?

3. Do black bees winter better, enter supers more readily, and live longer than Italian bees?

4. I want to transfer some bees during fruit-bloom. Can I get queens at that time? VIRGINIA.

ANSWERS.—1. It will do well.

2. Although they might not darken them very much, it will be better to take them off as soon as emptied. But it is well to remember that many think it is not a good thing to use sections that have heen kept over winter with honey in them, said honey having candied.

3. I don't know that there have been any exhaustive experiments that would afford a positive answer to your question.

4. You may do so by sending South.

◆

Keeping Bees from Swarming.

I have 5 colonies of Italian bees, 5 blacks, and 4 hybrids. I want to keep the hybrids from swarming. Please give the best plan. VIRGINIA.

ANSWER.—Here's one way. As soon as time for swarming, take from hybrids all but one brood and give to Italians. That will prevent swarming of hybrids, and hurry up the swarming of the Italians. When the first Italian swarms, hive the swarm on the old stand, and put the mother colony on the stand of the strongest black, removing the black to a new stand. Do this with each of the Italian swarms in succession. Each of the Italians will almost surely send out a second swarm, and these second swarms can be strengthened with brood from the blacks. That gives you 15 Italians, and if you want to Italianize the blacks you can start nuclei from them and give cells from the Italians that have swarmed.

◆

Moles or Mice Dead at Hive-Entrance—Stores Used in Winter.

1. Feb. 2 being warm, I took the guards from my hives to allow the bees to clean their hives. Feb. 3 was still warm, and I left them off at night. The next day was very cold and stormy, and I put them back. About Feb. 8 came a warm day; the 9th or 10th I happened to be passing and noticed 4 dead moles, about the size of house-mice, in a guard, with a few dead bees in their fur. What killed them?

2. I did not have room in my bee-house for one colony, so I left them out, wrapped in tarred paper, solid all around, top and bottom, open at the front. Now, in examining my bees the other day, those in tarred paper did not use half, and I should say not a quarter as much honey as the others. I looked at 6 last week; one had lots of sealed brood and the rest none, so far as I could see. The one in tarred paper had none. MISSOURI.

ANSWERS.—1. The bees probably stung them to death; but I wonder whether they were not short-tailed field-mice instead of moles.

2. One swallow doesn't make a summer, and it is possible that it just happened that the one hive in the tarred paper did the best for some other reason. It is quite possible, however, that the difference was owing to the tarred paper. It will be well worth while to try the thing on a larger scale next winter, and, if you do, please be sure to report, whether the result be favorable or unfavorable.

Thanks for your kind invitation.

◆

Transferring from Box-Hives—Sorghum Molasses for Stimulative Feeding.

1. I have some bees in box-hives, and I wish to transfer them into good hives this spring. What time would you consider the best for doing it? Is there any danger of robber-bees then?

2. Would it be wise to feed sorghum molasses to stimulate brood-rearing? If so, what method of feeding would you use? Would there be any objection to feeding in a vessel that all would have access to? I am working for comb honey. ILLINOIS.

ANSWERS.—1. Wait till the bees swarm, and transfer three weeks after the time of swarming. At that time there will be no brood in the way, unless it be a little drone-brood. The danger from robber-bees at that time is not likely to be great.

2. Yes, if there are not enough bees all about you so that you would have to feed all your neighbors' bees, you can feed right out in the open, which is really more like gathering from the fields than when you feed in the hive. But if there is plenty of honey in the hives, you may not do as much good by feeding as you expect.

◆

Put-Up Plan for Swarming—Hive-Ventilation.

I hope to try some of the plans you give in your book. With regard to the "put-up plan," page 163—

1. Would it not answer to put up the queen as soon as queen cells with larvæ in them were seen, instead of waiting and watching for swarms?

2. When you put down the queen again is there no danger of her being balled?

3. In the "foundation treatment" plan, page 186, will it not be necessary to destroy queen-cells also at the end of the week or 10 days when the old hive is put back on the stand again?

4. Do you think the ventilation you speak of, page 191, would be necessary here where the summers, particularly at night, are cool, not over 85 degrees for a top figure, and not often so high as that? BRITISH COLUMBIA.

ANSWERS.—1. Yes, it works well, although I have not had as much experience with that plan as with waiting for the bees to swarm.

2. I do not recall that she was ever balled, to my knowledge.

3. It is safer to do so, and the man that wrote the book ought to have known enough to say so.

4. Try it for extracted honey, and I don't believe you'll find too much ventilation. It isn't often here that we have nights above 85 degrees.

Texas Queens.

3 and 5 banded Goldens from a reliable breeder. You all know him—**DANIEL WURTH**—the Queen Specialist—who fills orders by **Return Mail**. I am here to stay, and thank my many friends and patrons for their liberal patronage in the past. Wishing you all a Happy New Year, I am ready as usual to furnish you with the best of Queens. Tested, in March and April, $1.25 each; Untested, in April and May, $1.00 each; 6 for $5.00. Breeders, yellow all over, $3.00 each. I am booking orders for early delivery

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FROM MANY FIELDS

Fine Weather for Bees.

We are having fine bee-weather here. Until the last of December we had no snow whatever, but from that time up to the middle of February it snowed frequently. We are now having warm, thawing weather.

GEORGE S. GRAFFAM.
Penobscot Co., Maine, Feb. 23.

Think the Bees are All Right.

Although it was very wet the first part of the season of 1903, we never had so long a flow from white clover before. From 75 colonies, spring count, I got 4000 pounds of section honey, mostly white clover, and increased to 160 colonies, which number was reduced to 150 through robbing.

We practice cellar-wintering here, very successfully. Although the thermometer ranged from 30 to 45 degrees below zero all winter, yet I think most of my bees are coming through all right; they are, however, beginning to get a little uneasy.

My father has kept bees for the last 30 years,

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and a number of years ago he was a subscriber to the American Bee Journal, but I never took much interest in bees until last summer, when they were all left on my hands. I at once hunted out one of the old Journals and sent $1.00 for my subscription, and then it was that my eyes were opened to the magnitude of bee-keeping.

My bees are all in old-fashioned hives with stationary frames, hives 13½x15 and frames 10½ inches deep. They are, of course, very inconvenient, and I shall hereafter put all my increase into new Langstroth-Simplicity hives and frames, and transfers the balance into the same next fall.

I enjoy the Journal very much, and hope it will continue to send forth the good things.

H. E. Babcock.

Monroe Co., Wis., March 6.

Long Winter Confinement.

The winter has been long, and I think there will be great loss in bees this winter, especially among those wintered out-of-doors. The bees have had but one flight since Nov. 15.

Adams Co., Ill., Feb. 26. S. N. Black.

Carrying in Pollen.

The record is "broken all to bits." What do you think, Feb. 28, and the bees just falling over one another carrying in pollen? That will about do, won't it? J. T. Reno, Jr.

Cedar Co., Mo., Feb. 25.

Bees in Fine Condition.

Bees are in fine condition; I never saw them in better shape at this time of the year since I have been in the business.

W. S. Feeback.

Nicholas Co., Ky., March 1.

Association and Individual Honey Dealers.

We would like to say a few words with reference to Mr. Drexel's article read before the Colorado Bee-Keepers' Association. We are not opposed to commercial associations of bee-keepers; we were merely pleased to note that one bee-paper had courage enough to speak of what we all have seen, viz.: That such associations are organized to make money, and should pay for advertising, the same as individuals. We do not want to be misunderstood as being opposed to their making money, either. Individual buyers must make money, so also associations. The article mentioned stated that the producers on his side of the range got a better price for their honey in 1902 than the Association at Denver realized for their members. That was the case in the Arkansas Valley, also, if we are correctly informed. It is apparent, then, that individual association buyers break even for the seasons mentioned. It will be so on to the end of the chapter, with the chances somewhat in favor of the individual buyers paying the best prices. Why? Because they have their own interest at stake, and have to consult with nobody before acting.

For instance, an Eastern buyer came along here early last August and bought a car from us at a price 25 percent above what it proved to be worth at the time of delivery—Oct. 15. He was not posted on the large general crop, and we were. We tried to sell him several cars, hoping thereby to benefit our customers by taking that risk on our judgment, but did not succeed in that. Individual buyers often buy on their judgment, which is offered as an explanation of their sometimes paying more.

But these are small matters, and should be so well understood that such criticisms would not be written against us as a class, as a portion of the article mentioned was. Honey-producers need the individual buyers just in proportion that the individual buyers need them. *Our* interest lies mainly in producing honey. We buy as a side-issue. We feel that as such we would deeply regret the elimination of anybody who bought honey.

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country. The importance of this is not emphasized as it should be. Next to advertising honey, this is the most important work that the National could engage in.

We are anxious to see the National take up the systematic advertising of honey; not because as was intimated by the Editor in his foot-note to our article, Dec. 1, but because we *produce honey* for a living. A moment's reflection will make it apparent that in buying we pay a price that we know we can sell on the markets as they are, at a profit. Anything done to improve the markets will benefit the producer, and him only, and exclusively, in the end.

To return to the article again. Mr. D. has not stated the matter fairly. He leaves the readers to believe that he had a car-load of honey, when as a matter of fact he had but half a car. That was a season, also, that prices made a rapid advance from opening figures. If there had been a car of the goods mentioned, it would have been taken at 10 and 11 cents, by the cash buyers, readily.

We trust that the Editor will let us add this closing remark at the risk of some free advertising. Our customers have received as much for their honey and procured their supplies as cheaply as any association in Colorado or elsewhere. THOS. C. STANLEY & SON.

Otero Co., Colo., March 11.

Some Experience With Bees.

When I was a boy my father was a bee-keeper to quite an extent, keeping as high as 50 colonies sometimes, in which I was somewhat interested, but they were kept in the old-fashioned hives, which did not pay so very well, owing to the heavy winter losses, and when the winter of 1882 came we lost all—some 40 colonies.

I did not have another colony until 1901, (3 years ago); 21 years of grace, and during that time lots of things had happened. I sold the farm that we lived on in Fond du Lac Co., and moved to Wood Co., Wis., where I now live. I have a farm here where I keep my bees and 40 head of cattle.

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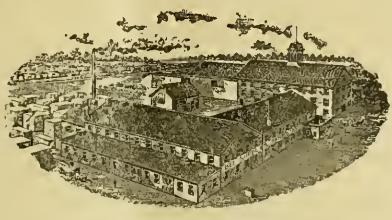

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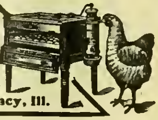

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Take Notice That the New Century Queen-Rearing Co. will have 1000 Queens ready for the mail by April 20. Tested, $1.00; Untested, 75c; 5 for $3.25; 10 for $6.00. Prices on larger quantities and Nuclei given on application. "Prompt service; fair treatment" is our motto.
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Please mention Bee Journal when writing.

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AUGUST WEISS, Greenville, Wis.

was a good one. It cast a good swarm and stored 75 pounds of honey. I became interested in them and bought 2 more colonies, and then began hunting bees in the woods. I found 5 trees, and saved all of the bees, and got 700 pounds of honey. I put the bees into the cellar, and 2 colonies died, so I had 7 colonies, spring count. I increased to 29 colonies and had 700 pounds of honey. I put the 29 colonies into the cellar and came out with the same number in the spring of 1903.

I began to take the "Old Reliable," and got "A B C of Bee-Culture," also Doolittle's "Scientific Queen-Rearing," and began to study, and found lots to learn.

My 29 colonies did not do so well, owing to the bad weather we had the last of July and the first of August, but I sold 2300 pounds of comb honey, and increased to 65 colonies, which are wintering in fine shape so far. I put them in winter quarters Nov. 14, and will leave them there until April 1, or later, as the weather permits.

I have just completed 65 hives and supers.

The cellar my bees are in holds the temperature from 40 to 45 degrees, and is dry enough to live in. I will report later how the bees come out.

I took first premium on comb honey at the Marshfield Fair, and got a diploma in blue (on Wood Co. exhibits) at the Milwaukee Fair.

FRED E. GRAHAM.

Wood Co., Wis., March 7.

Feeding Bees in Winter, Etc.

Last year was my first with bees. I have 10 colonies on the summer stands. I made outside cases and packed with chaff; they are all living at present, but I am afraid they may be short of honey. Can I make a syrup in pans and place it 30 or 40 feet from the hives and let the bees get it with safety, or is it likely to cause robbing? I do not want to unpack them, and I cannot feed them inside of the hive without it. A great many bees in this neighborhood have died this winter. My bees have been on the wing but twice since Nov. 17.

I am very well pleased with the American Bee Journal. My folks think I have gone daft on the bee-question. Bee-pasturage is poor here, the farmers all keeping sheep, and they keep the white clover eaten out.

Why does not some man produce a red clover that bees could work on? I think it could be done.

H. S. SPENCE.

Harrison Co., Ohio, Feb. 22.

[It would hardly do to feed in the way suggested. In cold weather the best way is to feed sugar-cakes, directly over the bees, as we have described several times the past few months in these columns.—EDITOR.]

Good Advice to Beginners.

I noticed from time to time reports of the success or failure of beginners in bee-culture, and as I am a beginner, and a pretty green one, I'll give my experience for the past season.

I had 2 colonies in the spring, which I had wintered, and which were in very good shape when I took them out of winter quarters. June 3 one of the colonies swarmed, and the next day the other one cast a swarm. Well, somehow, these 2 swarms gave me a very bad case of bee-fever. I got 6 colonies from these 2 colonies, and I bought 8 more swarms from another bee-keeper.

Now right here I wish to advise beginners never to start with too many colonies until thoroughly acquainted with the business. These last colonies I bought were either second or third swarms, and 4 of them proved to be queenless when I got them home. But I requeened them by putting in a frame of brood from other colonies. Of course, I wished to build my own hive, and unfortunately I took the advice of a compentent (?) neighbor bee-keeper, and made my hives like those he had invented for his own use. Another thing, I used the machine belonging to this man for putting foundation into sections. I got about 200 sections filled with foundation when I found to my disgust that the foundation was fastened about ¼ inch from the center. Of course I found out the result in sections that I took off the hive.

The honey season was short here last season, and I now believe I should not have taken any honey away from my late swarms. But, as before, I took bad advice, robbed my bees, and what is the result? I now find I have only 2 poor, weak colonies alive.

Another thing I wish to say about my hives: I have read a great deal this winter, and I made up my mind that I would keep bees in 8-frame Langstroth hives next season. Of course, I have about 20 of those other goods boxes on hand, and any one who takes a fancy to them can have them at a reduced rate. I may just say my neighbor adviser, upon seeing my Langstroth hives when completed, decided to do away with his "own get up," and use the Langstroth. He has been in the bee-business 30 years. Now I do not want you to think I put all the blame on the man who gave me advice. I blame myself for not reading up before going into apiculture, instead of reading up after I lost my bees. My advice to beginners is: Get acquainted with your work before you get too far into it.

I will just say, in conclusion, that when I am in need of advice I will consult my bee-books or the back numbers of the American Bee Journal.

I hope my experience will be a help to some beginner. HARVEY SMITH.

Ontario, Canada, March 2.

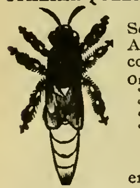
CONVENTION NOTICES.

Connecticut.—The Connecticut Bee-Keepers' Association hold their spring meeting in the Capitol at Hartford, April 28, 1904, beginning at 10 a.m. All bee-keepers and their friends are cordially invited to attend. A question-box will be opened, and several interesting essays presented. E. E. SMITH, Cor. Sec.

Watertown, Wis.

Utah.—The spring convention of the Utah Bee-Keepers' Association will be held April 5, at 10 a.m. and 4:30 p.m. Among other important questions to be considered will be the World's Fair, our State Fair, and the Portland Fair of 1905. We also desire to formulate some plan, if possible, to further increase the fraternal interest for the mutual benefit of our bee-keepers. We cordially invite all bee-keepers to be present. We also invite them without delay to send in their views on these and other topics. The convention will be held in the City and County building, in Salt Lake City.

Salt Lake City, Utah. E. S. LOVESY, Pres.



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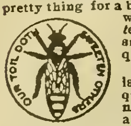

A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10c; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

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And the West
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199 SOUTH WATER ST. CHICAGO, ILL.

HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, March 8.—It is difficult to get more than 12c per pound for any lot of white comb honey, with sales chiefly at 11c; even at this price it does not work off as fast as owners wish it would. Selections in the most desirable grades bring a little higher price in small quantities; off grades sell at 1@2c per pound less. Extracted honey plentiful and slow of sale; white brings 6@7c; amber, 5@6c, according to quality and style of package. Beeswax active at 30c. R. A. BURNETT & CO.

CINCINNATI, March 19.—The honey market continues to be dull, and if anything the prices on comb honey are lower; concessions are made on bigger lots. I quote: fancy white comb from 12½@14c. Sales on extracted are made at the following prices: Amber, in barrels, 5¼@5¾c; in cans, ½c more; alfalfa, water-white, 6@6½c; strictly white clover, for extra fancy, 7½@8c. Beeswax, 30c.
C. H. W. WEBER.

PHILADELPHIA, March 21.—The season for selling honey has been prolonged on account of the cold weather, which has certainly been very fortunate for the bee-keeper, as there never was as much honey shipped in so late in the season to be disposed of. It has broken the price quite considerable, but there is still quite a demand, which otherwise would have fallen off. We quote: Fancy white comb, 13@14c; No. 1, 12c; amber and buckwheat, 9@10c. Extracted, white, 7@8c; amber, 6@7c. Beeswax in good demand, 31c. We are producers of honey and do not handle on commission.
WM. A. SELSER.

CINCINNATI, Mar. 4.—The demand for honey is brighter than it has been in the past 60 days. We continue to offer amber extracted in barrels at 5½@6½c, according to quality. White clover extracted is a drag on the market at 6½@8½c in barrels and cans. Comb honey seems to be reviving at 13½@15c for fancy.
Beeswax, 30c. THE FRED W. MUTH CO.

ALBANY, N. Y., Mar. 25.—Honey market dull and getting late; demand falling off for comb honey now. So much comb honey is out of condition, being candied hard in the combs makes most unsalable. We quote: 8@12c; nominal now. Extracted, white, 6½@7c; amber, 6@6½c; buckwheat, 5@5½c. Beeswax, 28@30c. H. R. WRIGHT.

BOSTON, March 22.—There is nothing new to note, either regarding the condition of our honey market or prices. The demand is naturally not so heavy as it was, owing to the warmer weather and the near approach of the maple sugar season. Prices remain same as before, which are as follows: White in glass-front cases at 16c; No. 1, at 15c. Supply is ample, and demand light at this time. Extracted, water-white, 8c; light amber, 7@8c; with but little call for dark Florida.
BLAKE, SCOTT & LEE.

KANSAS CITY, March 22.—The demand for honey, contrary to the usual market conditions at this time of the year, is slow, and only very low prices will induce the trade to buy in large quantities. Fancy comb honey is selling at $2.25; No. 1, from $2.00 to $2.15; amber honey and combs that are not well filled are selling at just what prices the trade will pay. Extracted honey is moving very slowly; there is very little demand for amber, and white is selling at 6@6½c. No demand for barreled honey.
C. C. CLEMONS & CO.

NEW YORK, March 7.—The market on comb honey is decidedly dull. There is some demand for white honey, but prices are ruling rather low. We quote fancy at 13@14c; No. 1, at 12c; amber, at 11c, and in round lots even these prices have to be shaded in order to effect sales. There is no demand at all for dark and buckwheat comb honey, and it looks as if some of it would have to be carried over. We quote nominally at 9@10c per pound.

There is a fair demand for extracted honey, at irregular prices, fancy white bringing 6½@7c; light amber, 5½@6c; other grades, 5@5½c; and Southern, common to fair, 50@55c per gallon. Beeswax firm at from 29@30c.
HILDRETH & SEGELKEN.

SAN FRANCISCO, March 16.—White comb, 1-lb. frames, 11½@12c; amber, 8@10c. Extracted, white, 5¼@5¾c; light amber, 4¼@4½c; amber, 3¾@4¼c; dark amber, 3¼@3¾c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

Market is very quiet. Offerings are of fairly liberal proportions for this late date in the season. Quotations remain about as previously noted, but the extreme figures quoted are based mainly on the views of holders.

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ST. LOUIS, 1904.

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FOR SALE—600 colonies from the Virginia apiaries belonging to the estate of the late Capt. J. E. Hetherington. These bees are Carniolans, bred from carefully selected queens, are perfectly healthy, and in the Hetherington-Quinby hive. They have had the personal care of Capt. Hetherington. For further information address, H. B. HETHERINGTON,
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Bee-Ranch For Sale.
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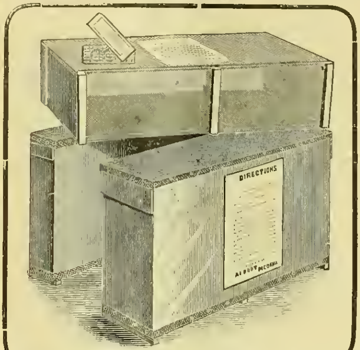
44th Year. CHICAGO, ILL., APRIL 7, 1904. No. 14.

Home Apiary of H. G. Sibbald, of Ontario, Canada.

Have You Lost Your Bees?



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Save Your Combs.

The winter losses in some parts of the country are heavy, and the demand for bees and queens will be large. Parties needing queens should send their orders at once, and state date when shipment is desired.

Early Italian Queens.

We are fortunate in being able to offer for April and May delivery a large stock of queens from our Southern breeders. While we have a much larger supply than ever before, it is highly important that you send your order at once to secure the queens when desired, as we will fill orders in rotation. We expect to be able to furnish untested queens from our Southern yards, in any number, after April 10th. Send your orders at once.

Prices of pure Italian Queens, untested, from our Southern yard for April and May shipment.

	1	12	50	100
Untested	$ 75	$ 8.50	$35.00	$ 65.00
Select Untested	1.00	11.50	47.50	77.50
Tested	1.50	17.00	70.00	130.00
Select Tested	2.50	28.50	——	——

Prices of Our Red-clover and Honey Queens.

Untested queen	$ 1 00	Select tested queen	$ 3 00
Select untested queen	1 25	Breeding queen	5 00
Tested queen	2 00	Select breeding queens	7 50
Extra select breeding queen, one year old			10 00

We book orders, and fill in rotation.

Imported Italian Queens.

We are prepared to furnish from the best breeders in Italy, imported Italian queens. They are put into our own yards and tested before sending out. We have only two grades—best, and fair imported, and prices are given in the table below.

Best imported queens............$5 00 Fair imported queens $3 00

The Root Queen-rearing Outfit.

In this outfit are embraced the best points of the best systems in use. It will give satisfaction to the amateur as well as the expert. The cell-cups are made of wood, wax-coated. No melted wax is used in their manipulation, as they are attached to the cell-stick by means of a small nail-point.

The nursery-cage combines the features of nursery and introducing cages. By their use a queen can be released on the candy plan or caged in the hive as desired.

In connection with the outfit goes a booklet on queen-rearing—one which ought to put the veriest amateur on the high road to success. Outfit comprises three cell-bars with 50 waxed wooden cells, one frame of cages (18), one cell-forming stick, set grafting-tools, and a book on queen-rearing..................$4.50

If sent by mail, add 50c for postage.

Tools for Queen-breeders.

Wooden cell-cup with point for attaching to bar, 50c per 100; $4.00 per 1000.

Same, waxed ready for use, 75c per 100; $6.00 per 1000.

Titoff wire nursey-cages, 15c each; $1.35 per 10; $12 50 per 100.

Frame for holding 20 cages, including cages, $3.00.

Cell-stick, 10c each; $1.00 per dozen.

Transferring needle, double-ended and nickel-plated, 15c.

Jelly-spoon, nickel-plated, 15c each.

We can supply, also, fine-pointed lace-scissors with extra large bows, for clumsy fingers, at 35c each.

Nuclei and Colonies of Bees.

We are prepared to furnish one, two, and three-frame nuclei and full colonies of bees in eight-frame Dovetailed hives or Danzenbaker hives. The nuclei are put up in light shipping-boxes made of basswood, the sides of which are only $\frac{3}{16}$ inch thick, and the ends $\frac{1}{2}$ inch. The top and bottom are covered with wire cloth. This makes a very light package, affords plenty of ventilation, and is strong enough to stand shipping 500 to 1000 miles.

Any of our nuclei, even the 1-frame, will make good strong colonies by fall if properly handled. The three-frame if properly managed can be increased four, five, or even ten full colonies by fall if bought now; and instead of having any black bees, one will have in the beginning pure Italians of the choicest stock throughout his apiary.

PRICES OF NUCLEI.

One-frame nucleus without queen				$2 00
Two-frame	"	"	"	3 00
Three-frame	"	"	"	3 50
Full colony in 8-fr Dovetailed hive				7 50

We can furnish with the nuclei any queen mentioned in the table of prices of queens.

One-frame Nucleus--This contains a frame partly filled with brood and bees. The condition of the hives at different seasons f the year vary so that we can not always put up nuclei in the same way; but in every case we aim to give full value. Weight about 7 lbs.

Two-frame Nucleus--This is just the same as our one-frame nucleus, except it has twice the amount of bees or brood, or of both. The box is larger, and holds two frames—one full frame of brood, or two frames partly filled. Shipping weight, about 10 lbs.

Three-frame Nucleus--This is three times the size of the one-frame nucleus, and is made up in the same way as the one and two frame. Shipping weight, about 15 lbs.

A Full Colony will contain 8 Langstroth frames in Dovetailed one-story hive—three full frames of brood, or equivalent, in six combs, and enough bees to cover fairly all the combs. No queen is furnished at the table price. Purchaser is to seclect the queen and add her price to that of the bees. Our colonies are all put up in new Dovetailed or Danzenbaker hives, painted two coats. Shipping weight about 40 lbs.

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Gleanings in Bee Culture one year, and one untested Italian Queen from our Southern yards..................................**$1.00**

We begin shipping at once. Orders filled in rotation. Do not ask for special arrangements; at this low price we can't make exceptions.

Gleanings in Bee Culture one year, and one untested Red-clover Queen for **$1.50**

We begin shipping these queens about April 15. Orders filled in rotation.

Guarantee.

We agree to deliver queens in good order to any part of the United States or Canada, from April 15 to October. In case of queens valued at $5 or more, we ship in a one-frame nucleus, (no charge for nucleus). If a two-frame or three-frame nucleus is wanted, add to the price of the queen the difference in price between the one-frame and the two or three-frame. Losses must be reported on arrival.

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THE OLDEST BEE-PAPER IN AMERICA
Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

GEORGE W. YORK, Editor. CHICAGO, ILL., APRIL 7, 1904. Vol. XLIV—No. 14.

Editorial Comments

Ordering Bee-Supplies Early.

It has been customary to offer an annual suggestion to purchasers of bee-supplies to order them early. While there may never be another season like that of 1903, still there are always quite a number of those who put off ordering the necessary supplies until the rush-time comes, which is usually in May and June. We shall never forget last season's experience. While all dealers like to do a good business, it did seem that for several months last year it was "too much of a good thing." If we had to go through such an experience every year, we would think that life was hardly worth living. But having had that experience, we can the better sympathize with those dealers who become overwhelmed with orders during the rush-time of the season.

In view of this, we want to urge upon all of our readers, who can foresee that they will require certain supplies, that they order them *at once*, so that they can receive them before the time when they will actually be needed. There must have been many bee-keepers last year who lost much honey because they could not get the necessary supplies. No doubt many of them decided then that they would never be caught that way again.

We believe that most dealers have made an extra effort during the past winter to provide themselves with a large stock of goods, so as to be able to fill orders as promptly as possible. Of course, their present stock may not last very long, but those who get their orders in first will be the ones who will be supplied.

We can not conceive of anything more exasperating, and trying on the nerves, than to be disappointed in getting bee-supplies when they are absolutely required in order to take care of the honey-flow in a proper manner. It certainly does not pay to get the colonies of bees in good condition for the harvest, and then be unable to give them plenty of storage-room when the honey-flow is on in good earnest. As we recollect the many urgent orders received last year, when it was impossible for us to get supplies fast enough from the factory to fill our orders, it makes us want to impress the fact very emphatically upon our readers that they should get their orders in *early*, so that there will be no doubt about their having the goods they need just when they must be used. We think a great many make the mistake of "living from hand to mouth" in this matter. They seem to be afraid of having on hand a few extra supplies. Fortunately, most bee-supplies are not perishable, so no one need fear loss from that cause when they have an extra supply.

During the rush honey season of last year, it was not a question of what bee-supplies cost, but the trouble was to get them at all. It seemed that practically all the bee-supply factories were several weeks behind and could not get caught up, as the season continued for so long a time. We remember having placed orders for three car-loads of goods at one time, but of course we could not have used them all in one week, even had they been so shipped. In fact, we could not possibly have handled three car-loads of supplies in one week, even though working night and day.

But please do not blame the supply-dealer later on if he fails to fill your order when there are so many others who, like yourself, have delayed sending in their orders. He probably will be doing the best he can, as no doubt every dealer desires to ship as promptly as possible, especially when he has received the money with the order.

Again we say, do not delay giving your order for bee-supplies to your dealer *in time*. Give him a chance to serve you promptly and well, and he will likely do it.

A Fault of the Paper Honey-Package.

Editor Root says that honey in paper packages must be gotten out of the way before hot weather, under penalty of making a dauby, sticky mess. That is a rather serious objection to the paper honey-package.

Winter Losses of Bees.

A request was made by Gleanings in Bee-Culture, some time ago, as to the result of the wintering of bees among its readers. The responses are summed up as follows for points east of the Rocky Mountains:

> There will be heavy losses, just as I feared. A large number report from 50 to 75 percent of the bees dead—some all dead. New York seems to have sustained the heaviest losses; then next in order I would place Michigan, Ohio, Pennsylvania, Indiana, Wisconsin, and the New England States. Illinois does not seem to have had very severe losses, although some bee-keepers have had a good many bees die. Iowa seems to show up well. In Missouri, and in most of the States west of the Mississippi and east of the Rockies, the winter has been very favorable, and the bees are in prime condition. There have been some losses in West Virginia, but most of the other States south of the Ohio River will show good wintering.
>
> But now let it be understood, the places where losses were very heavy seemed to be confined almost entirely to outdoor-wintered bees. I do not remember to have had a single report out of the large number received when there was bad wintering in cellars or repositories. A few bee-keepers in regions where losses have been extremely heavy, report excellent wintering outdoors. Among the number is J. B. Hall, of Canada.
>
> Whether these losses will affect the clover market next summer remains to be seen.
>
> Since the first of March the weather has moderated very materially over the country—just enough to give occasional flights in warm localities, but cool enough to prevent brood-rearing going on to any extent.

The foregoing agrees with the reports we have received on the same subject, as may be noted from week to week in our department "From Many Fields."

The "Glucose-Honey" Story Again.

We have received the following letter from Mr. J. F. Michael, of Randolph Co., Ind., dated March 19:

> Wonders never cease to multiply. My old home county newspaper has this statement:
>
> "The greater part of the honey sold in this country never saw inside of a bee-hive. A little dextro-glucose makes a 'pure select table honey.' This is quicker than the bees can make the 2,625,000 cells necessary to gather a pound of honey."
>
> I mailed the editor a copy of the editorial on the Inter-Ocean article, which appeared on page 195 of the American Bee Journal. I told him he was doing an injury to a great American industry, which has no trust to boom prices, but relies on supply and demand for its profit. I believe he did not intend any harm to our industry, and furthermore I believe he will tell his readers that there *never was one pound of manufactured honey sold in America.* J. F. MICHAEL.

We are glad that Mr. Michael so promptly called the attention of that newspaper editor to his great mistake. He certainly should be willing to make prompt and full correction. We wish more bee-keepers would follow up more promptly anything that they see in the newspapers or other publications that is so wide of the truth, and which might result in injury to the producers of pure honey.

Some of these days we hope the National Association will be able to take up all such matters that may be referred to them, and if corrections or retractions are not made by the newspapers about the publication of such untruths, it will be able to proceed in a legal way against them, and compel as public a correction as was the injustice.

If the National Association were able to do advertising in the daily papers, and thus place before the public the truth about honey, it would go a long way toward ending the baseless untruths that are continually passing around among the newspaper press. It will take a long time to correct the mistaken ideas that have been formed in the minds of many people through hearing the many statements that have been repeated during the last 20 years or more. It is a matter in which bee-keepers must co-operate, even if the National Association should undertake to take the lead in this very necessary work. We must get the truth a-going in the interest of not only the bee-keepers, but so that the people may be able to get correct ideas about honey and its production.

LATER.—Since writing the above, we have received this from Mr. Michael, dated March 28:

> *Gentlemen:*—The editor of the Democratic Advocate treated me very well in the statement of bogus comb honey. He says: "A bee-keeper says 'No.'" He prints the editorial article referred to, and then comes my comment, making a very nice retraction. I thanked him for publishing my article, and think the matter will die.
>
> J. F. MICHAEL.

And thus another newspaper editor knows more of the truth about honey than he did before. So do his readers. Let the good work go on.

Chayote as a Bee-Plant.

On page 180, from Mr. W. A. Pryal appears something on this subject. We have now received the following from Mr. Harry Howe, of Cuba:

> The writer of the Saturday Evening Post article on the chayote, was evidently drawing on his imagination in the interest of the seedmen. I have several plants growing, but I do not think it is ahead of the cucumber for honey. The fruit is a sort of cucumber with one big seed. The vine dies every year here. It is a climber, and bears lots of fruit, but not as described. HARRY HOWE.

About the same time we heard from Mr. Howe, we received Bulletin No. 28 of the Department of Agriculture on "The Chayote: A Tropical Vegetable, by O. F. Cook, Special Agent for Tropical Agriculture." From certain ear-marks, we are led to believe that the bulletin was sent to us through the kindness of Mr. Frank Benton, Apicultural Investigator for the Department of Agriculture. If we are correct in this, he has our thanks for his thoughtfulness.

Referring to the bulletin, we find the following paragraphs bearing directly on the chayote's

VALUE AS A BEE-PLANT.

As in other vegetables of the squash family, the stamens and pistils are in separate flowers, pollination taking place through the agency of insects. To attract these the flowers of both kinds, but especially the pistillate, yield abundant nectar, which is secreted in ten glands, two at the base of each of the lobes of the corolla. In most of the countries into which it has been introduced, bee-keeping has not been a regular industry, and the value of the chayote as a source of honey has not been noticed, but the reports of experimenters in New South Wales contain very emphatic statements on the subject:

> "When the plant is in flower I have noticed that the vines were swarming with bees, and as flowers are scarce in the autumn the plant will no doubt be valuable as a honey-producer.
>
> "The plant, which spreads over a large area, commenced flowering at the close of the year, and has been well laden with mellifluous blossoms ever since. The bees are extremely fond of the chocho, and with the apiarist the newly introduced plant must become a strong favorite."

From the photograph of a flowering stem it will be seen that the chayote differs from many Cucurbitaceæ in producing numerous flowers on each fertile branch. It has long been known that the flowers of this family are rich in honey, but from the standpoint of the bee-keeper they have been considered of little importance because seldom accessible in sufficient amount, though in the United States fields are recognized as good bee-pastures. The chayote seems to make up by numbers what the flowers lack in size, so that the yield of honey may be larger than in related plants. In addition to this there is the fact that Sechium is a perennial bloomer in the Tropics, and in the subtropical regions has a very long season. It is thus possible that in regions like parts of Florida, where bee-keeping is already an established industry, the honey-producing qualities of the chayote may be found of practical account in connection with its other utilities.

Since the foregoing was prepared for publication, we have received the following on the subject, from Mr. J. J. Siebert, of Porto Rico, where, doubtless, the chayote is quite at home:

> EDITOR AMERICAN BEE JOURNAL—
>
> *Dear Sir:*—In your issue of March 10, page 180, you will find an article about the "Chayote," called in Spanish "Tayote."
>
> Allow me to state that the Tayote is all it is claimed to be. As a nectar-blossom it has only one rival, that of the banana, blossoming all the year around. The fruit is pear-shaped, and can be prepared as a vegetable, salad, or as a preserve.
>
> Very truly yours, J. J. SIEBERT.

Miscellaneous Items

Mr. Morley Pettit, of Ontario, Canada, writing us March 26, said:

"I took the bees out of the cellar Wednesday, March 23, mostly in good condition; none dead. Outside bees were only fair—5 percent dead. Prospects seem good; but time will tell."

* * *

Mr. Will L. Cowan, of Montgomery Co, Ohio, a grandson of Father Langstroth, called on us last week when in Chicago. He is a tall young man, of excellent appearance, and seemingly fine ability. He is one of a family of seven children. His father died shortly before his grandfather, of blessed memory, the latter passing away in the fall of 1895. We had the great pleasure of meeting his mother and Father Langstroth at the National convention, held in Toronto, Ont., that year. It was the last meeting of bee-keepers Father Langstroth ever attended, as he died very suddenly about a month thereafter.

Contributed Articles

No. 4.—Comb or Extracted Honey—Which?

BY C. P. DADANT.

THE greatest item in favor of extracted honey as compared to comb honey is the economy of production to the bees. Comb costs the bees time, labor and honey. The quantity of honey needed has been variously estimated at from 2 pounds to 20 pounds to produce one pound of comb. Some modern writers have asserted that the cost had been exaggerated by previous writers, but no very definite proof has ever been adduced. The scientists who have tried the experiment by confining the bees and feeding them have found the cost so great that there must be some disadvantage in the confinement that made an increase of consumption. And so there must be. Most of the experiments have been more or less guess-work, as some condition or other has been overlooked that would change results.

It seems to me that the only way to arrive at anything like a correct solution would be to take two swarms of exactly the same weight, both loaded with honey, as is usual when they swarm naturally, and give to one of these empty combs, to the other an empty hive, and test the weight of honey and wax in each after 24 or 48 hours. Just as soon as eggs begin to hatch, in the hive to which the built combs have been given, the test becomes uncertain, as a portion of the harvest is used to feed the brood. There will still be some conditions of uncertainity, such as the greater or less number of drones accompanying each swarm—for these are great eaters—the greater or less amount of moisture contained in the honey, and other minor details. So it is impossible to get to a fixed result.

Then it is possible—I should say most probable—that the results differ in different conditions, as the fattening of animals differs in results according to the season, the warmth, etc. For I cannot help comparing the production of beeswax by bees to the production of fat by animals, although the two are not absolutely similar. Wax is a fatty substance, and requires similar ingredients to those of fat in its production. Honey from which it is produced, must necessarily be much changed in the process, and a great portion of its constituents eliminated.

I will add in this connection, that among those who have disputed the high cost of comb, in the economy of the hive, a French writer, Sylviac, in several European publications, has lately asserted that comb was made of some other material than honey, but this material seems to have remained a mystery for him as well as for the rest of the fraternity. I would not mention this assertion, which has no weight, except as an example of what arguments may be used, by writers of undoubted ability, when they allow themselves to draw too much on their imagination. The writer in question, I will say, is not a practical apiarist, but an amateur.

I have often heard the remark made that it is astonishing how fast bees can build combs in a good season. I have noticed it myself, but we know that a pound of combs occupies a very large space, and as the bees harvest honey very freely at the time the comb is built, even if combs were to cost them 15 pounds of honey for each pound of wax, it would be but a day or two of delay to build most of the combs of a colony, yet the saving realized by giving them the comb already built would be well worth considering.

I have heard it stated by some apiarists that the day was coming when the production of beeswax would pay better than that of honey. No one has had faith enough in such an assertion to give it a trial in practice, and I dare say that it would not take long to convince any one of its fallacy. Those who have tried to feed extracted honey to fill up sections have invariably reported that it did not pay, that the cost was too great, and I do not believe it will ever pay, much less will it pay to let the bees expend their honey for wax-production alone.

When we put all testimonials together, the cost of comb honey appears to be fully twice that of extracted honey; that is, the bees can harvest twice as much honey when the combs are already built as when they have to build them. This I take as an average. In some seasons there will be less cost to the building of comb, while in other years the cost will be increased. The most expensive production of comb honey to the bees comes when the crop is very short and very sudden. If the weather has been cold, backward, rainy, unfavorable, in short, and a suitable day comes suddenly to be followed perhaps by five or six other such days, and then the crop ceases—in such a case the production of extracted honey is far ahead of that of comb.

In the first instance, the combs are ready for harvest and there is no delay, no loss of time, the bees are at work *en masse*.

In the second instance the suddenness of the crop has taken us unawares, and they have had hardly time to build a few combs when the flow is at end. A large crop cut short, suddenly, by a storm and continued bad weather, will also leave the comb-honey production in bad shape, as many combs have been built, and partly filled, and must be abandoned. A big flow, uninterrupted and steady, is the most encouraging for comb-honey producers, and that is why I insist that the production of comb honey will be most especially successful in localities where large crops are the rule.

My last, and least, grievance against the production of comb honey is that it requires the use of a number of contrivances for which I never had any fancy—separators, queen-excluders, honey-boards, etc. With the production of extracted honey none of these is needed; at least not by the methods we follow. We connect the upper and lower stories as freely as possible, and make things as convenient for the bees as it is possible to do.

Now that I have given you as much as in my power the most favorable view of the production of extracted honey, I must do the fair thing and give you the dark side of the picture in a closing article. Hancock Co., Ill.

The Deliquescent Powers of Honey.

BY ALLEN LATHAM.

MUCH has appeared in the American Bee Journal about the water-gathering powers of honey, some writers taking the ground that honey has no such power, and others taking the other view. On page 30 we get the most extreme statement of the former. Mr. Johnson not only informs us that honey will not gather moisture, but that no liquid has that power—a statement which he would find most difficult to prove, except in a technical and hair-splitting way.

There are many liquids which are, in the common meaning of the term, deliquescent, and honey is one of them. I have recently tried an experiment to prove that honey has this property, and though my experiment is not absolutely conclusive, it will probably satisfy most of the readers of the American Bee Journal.

A watch-glass was cleaned and counterpoised on a balance of extreme delicacy, a piece of paper the size of the capping of a worker-cell being sufficient to throw the balance out of equilibrium. There was then placed on the glass 5 grams (about a thimbleful) of honey—a well-cured honey of first quality. Honey was added or subtracted by a pin-point till a five-gram mass was excellently balanced. The balance was left with the glass of honey on the pan, and the counterpoise on the other pan for several days, being weighed each day. Day by day it lost weight.

The air in this locality during the present winter has been extremely dry much of the time, the humidity running as low as 30 not infrequently. A saucer of honey set aside has gummed over instead of getting thin, as so often happens. So with the honey in the experiment, it got thicker and thicker, and showed no signs of gathering moisture. I saw that I should have to create a moist atmosphere for it, and on the 5th or 6th day began to burn a jet of hydrogen in the balance case a few minutes daily. Burning hydrogen furnishes pure water. Fearing to injure the delicate balance by the moisture, I placed the glass under a bell-glass under which water had been boiled, this being first done on the 18th day. This was continued till the close of the 33rd day.

On the 33rd day I dried the bell-glass thoroughly, and put under it with the watch-glass of honey two shallow dishes of calcium chloride. This chemical has the power to take water from the air, and is used to dry air with. My purpose was, of course, to dry the air and thus cause the air to take away from the honey the moisture which it had accumulated. These conditions were continued for nine days.

The watch-glass of honey was weighed daily when possible. Business and an attack of the grip prevented an unbroken record. I offer below the results, which will tell a story for themselves.

It is to be observed that the loss or gain in weight is not uniform, a fact which is to be accounted for by variations in temperature, humidity of outer air, and irregularity in replenishing the moisture in the air under the bell-glass. I incidentally discovered that air will get dry though there be the tiniest crack for the diffusion of the inclosed air with that outside.

I say that my experiment is not absolutely conclusive, for the reason that I did not analyze the honey before and after the experiment, but only a very obtuse person will question the conclusion that honey will absorb water. Several circumstantial facts point that way. The honey grew thinner as it increased in weight. As the honey grew thinner it gained in bulk. At first there was only a thimbleful, but at the time of the greatest weight there were about two thimblefuls. The increase in weight varied very regularly with the amount of water in the air. The honey grew thicker as it lost weight. The honey did not differ in appearance at the close from what it was at the start of the experiment.

I tasted the honey at the close. Though it had not lost body nor sweetness it had lost all its fine flavor, and tasted rank. Mr. Johnson will doubtless say that this proves decomposition, but not I. I believe that it simply means that the volatile oils which the honey had at first had been lost, and that the foul air from the burning alcohol lamp had given a new flavor. Flavors are hard to weigh on a balance, though they may be weighed with money.

Had decomposition of any sort taken place it is reasonable to suppose that gases would have appeared in the honey. This was not so. At all times the honey was clear as jelly, and whatever was gained or lost was through the surface of the honey. This last fact is seen from the circumstances that when the honey was losing weight the surface honey was thicker than that below, while the reverse was true when the honey was gaining weight, the surface then being thinner.

In trying to prove that honey is deliquescent I have at the same time proved it to be efflorescent. This is much like saying that a thing is white and is also black, for deliquescence and efflorescence are directly opposed properties. Yet the honey gained water when the air was humid, and lost water when the air was dry. It would seem that there is a certian (possibly not fixed) humidity point above which honey will gain moisture from the air, and below which honey will yield water to the air. I think that this point ranges near 60 percent of humidity. I have not proved it.

It will be observed that the honey weighed the most on the 30th day, when it weighed 7.045 grams, a gain of over 2-5, or about 41 percent. After it had reached this weight I found difficulty in keeping the air sufficiently moist to permit the honey to hold that weight. This suggests that honey as it gains water becomes less deliquescent, and should give up water though the humidity is over 60 percent, say.

Practically it makes no difference to the bee-keeper whether the honey actually takes in water or not, but it does mean much to the bee-keeper to keep well in mind that honey and air should have a water-tight, and air-tight, partition between them.

	Grams
Weight at the start	5.0000
" " close of 1 day	4.98
" " " " 2 days	4.96
" " " " 3 "	4.9465
" " " " 4 "	4.935
" " " " 5 "	4.943
" " " " 7 "	4.962
" " " " 8 "	4.975
" " " " 9 "	4.995
" " " " 10 "	5.016
" " " " 11 "	5.005
" " " " 12 "	5.11
" " " " 15 "	5.125
" " " " 16 "	5.262
" " " " 17 "	5.457
" " " " 18 "	5.677
" " " " 19* "	6.042
" " " " 23 "	5.735
" " " " 24 "	6.053
" " " " 25 "	6.32
" " " " 26 "	6.545
" " " " 29 "	6.795
" " " " 30 "	7.045
" " " " 31 "	6.86
" " " " 32 "	6.837
" " " " 31 "	6.98

Calcium chloride placed in bell-glass.

	Grams
Weight at close of 4 days	5.253
" " " " 5 "	5.137
" " " " 6 "	5.035
" " " " 9 "	4.9973

*Taken sick at this time. New London Co., Conn.

⁂

Use of Separators in Section Honey, Etc.

BY E. V. PAGAN.

MR. WM. M. WHITNEY, whose communications I always read with interest, in his article on page 198 entertains the idea that it is better not to use separators.

He argues that because brood-combs straight as a board are easily produced, the same results should follow with sections without separators. So they will, in every case, if sections, like brood-combs are filled with brood. That's not what sections are for.

Give him, he says, certain things, among them a full force of good workers, a good flow of nectar, and some one else can use the separator. If Mr. Whitney always has these he is specially favored, and may dispense with separators. Management has much to do with the strength of colonies, but the best we can do most of us do not always have colonies of the same strength, and it sometimes happens that for some reason a colony working on sections no longer has "a full force of good workers." Still, we might get along without separators so far as that is concerned.

But "a good flow of nectar" during the whole of the time sections are on is a thing not within the control of the bee-keeper, and probably few bee-keepers can rely on a thing of that kind one year after another. Often a lull comes right in the flush of a flow, and after a few days the flow is on again, and at such times if there are no separators there is likely to be some bulging of sections.

However it may be with Mr. Whitney, the fact remains that a large number of bee-keepers, men of much experience, who are in it for the dollars, and wouldn't use separators if it didn't pay, say they can not dispense with them. They are probably quite willing to be the "some one else" that Mr. Whitney says can use the separator.

SIZE OF QUEEN-CELL OPENING BEFORE RECEIVING THE EGG.

On page 199, Mr. Atwater suggests that "queen-cells, just before being supplied with an egg, are always contracted at the mouth to about the size of a worker-cell." I think the bees will not support that view, Mr. Atwater, about a third of an inch being probably the diameter you'll find. But I suspect that if you ask a queen she'll tell you that the shallowness of the cell makes up for the width, and that she's just as much cramped to lay in a shallow queen-cell as in a worker-cell.

RELIQUEFYING JARS OF HONEY—RENDERING BEESWAX.

There must be a leaky spot in our good Afterthinker's memory. He speaks of "reliquefying jars by dry heat without destroying labels," as if it were a new thing. Page 200.

Mr. Hasty, in speaking of wax-pressing, on the same page, has evidently in mind his experience with methods other than the German wax-press, when he speaks of the value of the several diggings over, and the danger of leaving wax boiling on the stove. I feel sure that a man of his good judgment would not give several diggings to a batch of stuff in such a wax-press, and I have serious doubts whether he would give even one. Neither would he find there was anything dangerous in going off and leaving the machine to itself all day long, unless the water should all boil out.

FLY OR DRONE GATHERING POLLEN.

A. Y. Baldwin, page 203, wishes he was a Mr. Hasty. Was he not a bit hasty when saying what he did at that very time? Because there is a fly that looks very like a drone, does that warrant him in saying that the insect Editor Freyhoff saw gathering pollen was one of those flies? Editor Freyhoff is not the ignoramus that Mr. Baldwin supposes him to be. Would it better the case any if Mr. Freyhoff had said it was a fly? Did Mr. Baldwin ever see a fly of that kind, or a fly of any kind, busy at work gathering pollen?

Convention Proceedings

Report of the Ontario Bee-Keepers' Convention Held in Trenton, Dec. 1, 2, and 3, 1903.

BY MORLEY PETTIT.

(Continued from page 246)

Next on the program was the question-box, taken up by Mr. Morley Pettit, as follows:

KEEPING POLLEN OUT OF SECTIONS.

"How can we keep pollen out of the sections?"

Mr. Pettit—In hiving swarms on starters, use starters and one comb to catch the pollen, also a queen-excluder.

Mr. Sibbald—Would you not have bees start more in the lower story by using combs?

Mr. Pettit—I have not had that trouble to any great extent. Of course, this is a matter of locality.

Mr. Sibbald—They build more drone-comb.

Mr. Pettit—Yes, that is the objection which we have been unable to overcome.

Mr. Gemmill—Limit the number of starters.

SEPARATING PROPOLIS FROM BEESWAX.

"When melting up beeswax how do you separate the propolis?"

Mr. Pettit—The propolis should be kept separate. I know of no other way.

Mr. Hall—The propolis and pollen will settle out of the beeswax when it is melted up.

"Has any one experience in using paraffin in making comb foundation?"

Mr. Pettit—I have had no experience.

Mr. Brown—It was sent to me as a sample used in Europe.

Mr. Lowey—I had some adulterated with it, and I want no more. I put it in sections, and it would not do.

Mr. Newton—Two years ago I received a lot of wax adulterated with it. I tried to make it into foundation, and could not.

SIZE OF HIVE.

"What size of hive would you advise?"

Mr. Pettit—I have used a hive equal to the 10-frame Langstroth; it is good for comb honey with dummies. It is also a good hive for extracted honey, but probably not quite large enough. At any rate, I have placed my order for 100 12-frame Langstroth hives for next season's use.

Mr. Dickenson—This is not according to what the supply men have listed and advised for years. When men have made a study of the matter, and have 200 or 300 8-frame hives, what shall we do? Fortunately we have the 9-frame hive.

Mr. Pettit—I am always anxious to receive advice, but I must use my own judgment as to accepting it. If my queens would not fill more than 8 frames I would dispose of them and get better ones. As to using the two-story brood-chamber of Langstroth combs, I find that in a few weeks the lower brood-chamber is largely forsaken, the combs become clogged with pollen, and soon take on the appearance of a deserted house.

Mr. Hall—I am an old-fashioned bee-keeper, with an old-fashioned hive. I began, 28 years ago, with a hive equal to the 11-frame Langstroth. If I could I would add one or two more frames.

Mr. Holtermann—We follow others too much without reasoning. In five years there will be a large increase in the use of large hives.

Mr. Webster—We must have large hives to get the bees and honey.

Mr. McEvoy—I have 8, 9, and 12 frame hives, but I prefer the 9-frame.

Mr. Dickenson—It is very important in the foreign market to have clover and basswood honey separate. The large hive will mix honey.

Mr. Holtermann—I think that in the large hive kept together with a small one, it is no larger in proportion.

Mr. Dickenson—With two supers you can't keep clover and basswood separate.

Mr. Pettit—If you want to keep clover and basswood separate, you must use only one super.

Mr. Newton—A colony in a 16-frame hive will swarm as soon as an 8-frame.

Mr. Darling—I have found them to want to swarm when the brood-chamber is only two-thirds full.

Mr. Pettit—You miss it by not putting on a second super till the first one is two-thirds full. Both should be put on at beginning of the season.

BENEFIT OF THE HILL'S DEVICE.

"What benefit is the Hill's device on top of the frames to hold up the quilt?"

Mr. Pettit—It gives a passage from one comb to another, so that bees do not need to leave the cluster and go down under the lower edge of the comb. For outdoor wintering, with the Langstroth depth of frame, it is quite necessary. We do not use it in the cellar.

CARRYING EGGS FROM BROOD-CHAMBER TO SUPER.

"Will bees carry eggs from the brood-chamber to the super?"

Mr. Pettit—I don't know. I know they will carry them from comb to comb. Drone-brood in the super is probably from laying workers.

GETTING NEW EXTRACTING-COMBS.

"If you want a new set of extracting-combs, would you use starters or full sheets?"

Mr. Pettit—I would use full sheets.

Mr. Newton—Messrs. Hall and Holtermann advise full sheets.

Mr. Pettit—I am not fully decided, but I believe it will pay to work into worker-combs for extracting, for various reasons.

Mr. Sibbald would let them build combs from starters. They naturally secrete wax which should not be wasted.

Mr. Pettit—Uncap deep while extracting. They can use extra secretion to draw out these combs.

WHITE CLOVER HONEY IN BARRELS.

"Where at the present time is the best market for white clover honey in barrels?"

Mr. Pettit—Wherever you can get a sale.

Mr. Sibbald—I believe there has been too much put in barrels this year.

MOVING BEES EARLY—TRAMP BEE-KEEPERS.

"Would it pay to move bees early in March, and place them on the summer stands?"

Mr. Pettit—Mr. Lott answered this very well in his paper. It is very important to have colonies moved to an out-yard early, to get the spring flow.

"What shall we do with tramp bee-keepers?"

Mr. Pettit—I have not met any. Farmers are learning the value of bees to alsike. I had a man come to me early in alsike bloom and insist on me bringing bees to his place, 14 miles away, for the benefit of the seed in his alsike. This was done, the farmer got more alsike seed than his neighbors, and the bees got a good crop of honey.

REPORT OF THE HONEY EXCHANGE COMMITTEE.

A report of the Ontario Honey Exchange was presented as follows by Mr. H. G. Sibbald:

The Honey Exchange Committee appointed at Barrie, held a meeting in the office of G. C. Creelman, in April; present, Messrs. Newton, Chrysler, Couse, and Sibbald.

It was decided to sell the honey of members through a reliable wholesale house, to collect reports, and advise members as to the probable crop and prices. All members to have the right to sell at wholesale and retail, as per circular issued to members.

The committee met again at Woodstock, Aug. 15. Grading committee also present. Decided that price of honey in new, clean, 60-pound tins should be 7½ cents, f. o. b., Toronto. Comb honey $1.65 to $2 00.

Grading rules were drafted. A committee of the president and secretary was appointed to confer with Rutherford & Marshall with a view to their handling honey for members. We were led to believe that all would be agreeable, but only one member of the firm had been consulted, and when the matter was talked over by them together they decided not to handle the honey. They said that members had already sold to firms in Toronto contrary to their understanding of our proposal, viz.: To give them sole agency for members' product in Toronto and other places named in prospectus to them.

While we failed to handle the honey this season, your committee have done considerable work collecting and distributing reports, which was an object of the committee. Grading rules were also drafted, which ought to be of lasting benefit to bee-keepers. Our membership increased to 62, and after paying the traveling expenses of the committee, and printing, a balance of $7.65 remains.

H. G. Sibbald.

Mr. Sibbald—The exchange failed to handle honey this year because bee-keepers held off from joining until they would see whether it was going to pay or not. Some members did not like the rules; they thought they should be allowed to sell all they could in Toronto, then place the balance in the hands of the firm that had agreed to handle our honey.

Mr. Gemmill—We must co-operate.

Mr. Morley Pettit stated that while the committee had done a good work—as good as could be expected for the first year—the crop reports would have been much more valuable had they come earlier in the season. The large number of small producers makes it exceedingly difficult for an exchange to operate and control prices. In any case it can do nothing without money. A stock company seems to be the only solution of the difficulty.

Mr. Wm. Couse agreed with Mr. Pettit, that we must have money. The committee has done good work in making reports, and grading rules, and the prices set were not far off from those at present prevailing.

Messrs. Morrison and Lowey moved that the grading rules, as formulated by the Honey Exchange, be printed in the annual report of the convention. Carried.

Mr. Holtermann spoke at some length on the work of the Honey Exchange. He said that the committee had done good work in fixing grading rules, as there was here a great need. But it was necessary to have an incorporated limited company. He doubted if we could ever control the output on account of the great number of small producers, and the almost universal distribution of honey-plants. We often hear, he said, of the Citrus Fruit Exchange, but there is no comparison. Citrus fruit is grown in a comparatively small area of country, but honey can be produced wherever the sun shines and flowers bloom. Dairymen have not tried to fix prices, neither have fruit-growers, nor poultry men—they have the best men in the country to help them to produce a good article, and to open up the market. They have aimed at organization in production. A better product brings a better market. The government has helped the fruit-growers, etc., in producing and marketing a good article. The government has shown itself willing and anxious to help us in so far as we show a disposition to help ourselves. We must be very particular to market only a first-class article, properly graded.

Mr. Dickenson found no difficulty in marketing good honey without government assistance.

Mr. Holtermann—How can we keep poor honey out of the market without government help? Other associations ask and receive help. We pay taxes, and should have help as well as they.

Mr. Dickenson—We can not be put into the same class with fruit-men, because the country is so easily overstocked with bees.

Mr. Lott—We want a system of inspection, as in the case of government inspection of fruits. We should have a government expert to inspect all honey before it is shipped, to see that no unripe or otherwise inferior honey goes on the market.

J. L. Byer—I agree with what has been said. Government supervision has made, and keeps up, the apple market. The same would apply to honey. Then we want a government official to see after the market. We don't know where to ship our honey—don't know the names of firms who would handle it. Mr. Holtermann's criticism is good. If the government does not appoint an inspector of honey, who will? The Dominion government is the place to get it. They could also help in equalizing the distribution of honey throughout the Province.

W. J. Brown—I believe Prof. Robertson, of Ontario Agricultural College, offered, some years ago, to procure a market for us.

Mr. Holtermann—If you want to sell honey you must send a man who knows all about honey. Don't send a dry goods man to sell groceries, etc.

Speaking of quality of honey, Mr. Dickenson said that he found the best honey in the upper of two supers where no fresh honey would have been put in for a few days. He mentioned the paper of Mr. McIntyre, of California, read at the National convention, as being of great value to him. He agreed with Mr. McIntyre, that under ordinary conditions honey need not be more than half capped to be of good quality. As to marketing, every man should establish his own name, and always send a good article; then he need have no fear of harm from poor honey sold by others.

Mr. Darling—Every man has a monopoly of his own name; no one can steal that.

Mr. Holtermann—It is a strange business principle to say that the price of your goods is not affected by other goods. When an inferior honey is there to sell at a lower price, it is bound to affect your price.

Mr. Morrison—As to the advisability of getting government assistance, the government looks after the commerce of the country, forms tariff laws, etc.; we use a government grant. Why not let them help get a market?

Mr. McEvoy thought that the price of cheap honey would have no effect on that of higher grades.

Mr. Fixter advised sending honey to the Ottawa Fruit Exchange.

Mr. Darling had seen them selling goods at auction by the Ottawa Fruit Exchange, and did not think much of the idea.

Mr. Lowey would not advise shipping to them, any more than to any other commission house. There is much loss incurred by the ignorance of these men in storing and caring for honey.

Mr. Miller thought the government had as much right to assist us as it had to assist any other producers in the country. Appoint a responsible and capable man to inspect the honey here, and have a man in the foregn market. He saw no need for capital; they should just get the money and send it to the man who had produced the honey. If poor honey were sent in by any member, return it to him, and it would probably not occur again.

Mr. Chrysler—It would be necessary to incorporate and have money.

Mr. Pettit—The most important work that can be done along this line at present is to collect reports, say three or four times—first when the bees come out of winter quarters, as to their condition; second, at the beginning of clover, as to the condition of bees at that time; third, at the end of the white honey-flow; and fourth, from those who produce fall honey, when that is harvested.

It was moved by Mr. Sibbald, and seconded by Mr. Byer, that a committee be appointed by the Association, to collect reports of the honey crop, etc., and distribute the same to members; also to approach the Department of Agriculture at Ottawa, with a view to establishing a market in England, with power to arrange for a system of grading by special act of parliament. Carried.

It was moved by B. O. Lott, and seconded by C. W. Post, that a committee be appointed to revise the by-laws of the Association, the committee to consist of Messrs. Sparling, Holtermann, Armstrong, Chrysler, Couse, Scott, and Post. Carried.

(Continued next week.)

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

White Nougat Candy of Marseilles.

Boil over a very mild fire 2 pounds of choice honey (white preferable), and keep moving it with a wooden stick. After one hour of boiling, mix with the honey, still on the fire, the whites of 6 eggs beaten thick. When the mixture has become brittle (which you can tell by dropping some into cold water), draw the vessel from the fire and add immediately 1¼ pounds of burnt sugar (broken sugar). Keep agitating until the whole mass will have lost part of its heat. Now add 6 pounds of peeled, dried and hot almonds; also 1 pound of peanuts (peeled, too). Flavor with vanilla or lemon.

Now spread over a table a layer of wafers (about 1x2 feet), and over it pour the mixture, still hot, so as to make it about ½ inch thick. Over this again spread another layer of wafers. Place on top a solid board, heavily laden. After a quarter of an hour, divide the large cake into smaller ones, wrap and pack carefully in paraffin paper or other suitable covering.—(From Diction-universal of Larousse, art nougat.) H. Dupret.

Quebec, Canada.

We are under obligation again to one of the brothers—really we can't get along very well without their help, many times—for helping us out in the candy business. France is the original home of nougat candy, and Mr. Dupret is evidently a Frenchman, so the recipe may be relied on. Just what is meant by "wafer" is a question. Probably those weetened affairs like miniature cookies made very thin. But I think the nougat candy formerly sold in this country was made without any wafers.

Successes and Failures—Wintering.

I have been intending for a long time to write you of our success, once again, with the bees. For several years we have not had a crop of honey, some years the failure being caused by spraying apple-trees while in bloom. The bees would, apparently, be in good condition—hives full of bees—but suddenly, almost, the brood would be left unprotected, as if the bees had all swarmed, while we knew none had cast a swarm.

Failure of clover to bloom the last few years, caused by winter-killing, has been our latest failure; also cool weather in June, just when the clover ought to be yielding honey, if we get it at all.

The past season was abundant in clover and other flowers. I think I never saw honey come in more abundantly for 6 weeks; such swarming! I suspect we may always expect swarming when honey is coming in freely—such has been our experience when running colonies for comb honey. The colonies run for extracted we generally choose from the weakest ones, and build them up from the swarming colonies, so we do not get so many swarms from those until after they have built up, and we take away their full combs to extract, or give them sections and then they are almost sure to swarm; but extracted honey does not sell so readily as comb, and then it seems to me to be about as much trouble to get as comb.

I have been so driven with work that I failed to finish this letter, commenced over a month ago. Our bees have, I think, wintered fairly well, only 2 colonies dead out 80, and they were queenless; but it is too early to know how they will come out, for there are lots of dead bees thrown out of the hives, but they fly fairly strong, and have a great abundance of honey, but our neighbor's bees that were packed in chaff—I should think many colonies would be dead. Mrs. L. C. Axtell.

Warren Co., Ill.

In former years Mrs. Axtell was noted for large crops of honey, and it must have been somewhat trying to have a series of years of failure. Her many friends will be glad to know that the tide has again turned, and we may hope that 1904 will be with her, as with many others, a repetition of 1903.

Honey for Chapped Skin.

Honey is good for chaps in general, and in Praktischer Wegweiser it is specially commended for chapped hands and lips. A tablespoonful of honey in a quart of warm water, applied to the afflicted surface, smoothes and softens the skin very pleasantly.

Contracting or Uniting Colonies—Which?

Last fall I packed 35 colonies on the summer stands. The last week in March we had good weather, so I gave my bees a flight. With a trembling heart I watched to see how many colonies were still living. (I have especially taken up bees to earn something, since my husband lost his arm in the manufactory.) To my great joy all my colonies were living, not one lost. The weather was again fine the next day, so that I could take away the bottom-boards and shove others under; likewise renew the cushions that were too damp. Thereby, however, I found that many colonies were weak.

Please advise me: Is it advisable to contract colonies with bees covering two or three frames so that they may yet prosper? Or, is it better to unite two colonies, so that from the 35 I may have perhaps 18 or 20?

Cook Co., Ill. Mrs. Anna Weckerle.

Don't be in too much of a hurry about uniting. Sometimes a colony with only enough bees in early spring to cover two or three frames, yet having a good queen, will pick up wonderfully as the weather becomes warmer. In the fall it is well to unite weak colonies, but in the spring nurse them up good and warm, and give them a chance to see what they will do.

Manicure Scissors for Clipping Queens' Wings—Honey in Brown Bread.

We often read articles in the Bee Journal and other bee-papers about clipping queen's wings, and it seems to us that people make hard work of it.

We began with one colony 5 years ago, and now we have 26. We have never lost a queen from clipping, and as we do not touch our fingers to the queen, there is no odor left on her to excite the bees to injure her. Perhaps others would like to try our way, which is to use a pair of "manicure scissors." It is usually easy to slip one blade under the wings and quickly clip them as soon as the queen is seen on a frame, but if she does get to running about, just watch your chance, and be quick when she does stop for a moment.

The long, slender, curved manicure scissors prevent any possibility of the points touching the queen.

Have any of the sisters ever tried using honey instead of molasses in making brown bread? Just try it, and see how good it is. Here is the recipe:

HONEY BROWN BREAD.

One cup corn-meal; one cup rye-meal; one cup sour-milk; ½ (or less) cup of honey; a teaspoonful of salt, and a teaspoonful of soda. Steam 4 hours, then dry in the oven 15 minutes.

From a sister who finds the bees fascinating to work with. A. R. Jacobs.

Worcester Co., Mass., March 20.

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

THICK OR THIN TOP-BARS.

As to whether to use thick top-bars or not, about 17 experts wanted half an inch thick or thicker, to 11 who wanted their bars less than a half inch. Few, if any, seemed to want the extra-thick bars of an inch or more. Page 132.

SCRAPING AND GRADING SECTION HONEY.

I think Frank Rauchfuss is sound where he finds it poor tactics to scrape sections and case them at the same time. First, get a good pile of each grade, then take a case and devote your mind wholly to filling it just right. Doing it the other way you are manifestly sure of not getting the best casing possible, and somewhat liable to waste time by driblets, until the one operation takes more time than the two—leaving no advantage of any sort. Page 132.

DRONES AND SWARMING.

At the Northwestern, when the relation of drones to swarming was up, Pres. York didn't ask, How many think the presence of many drones *decreases* the swarming tendency? I think that is at least a proper question to ask. If I'm right, colonies devoted to rearing quantities of fine drones usually refrain from swarming. And I feel pretty strongly that Mr. Longsdon is mistaken where he says that you can make a disinclined colony swarm by putting in drone-comb. Behold my brand-new quack-scheme! To prevent the swarming of a colony that has begun to contemplate it, introduce a large excess of drones to them! Whether they soon go to work and kill them off, or whether they keep them in a disgusted sort of way, I quack it that swarming will be given up for the time being. Page 137.

MATING OF SUPERSEDURE QUEEN.

Instead of saying, "Mating of a Superseded Queen" (caption, page 137), say Mating of a Supersedure Queen. That term can be taken as meaning the young queen, while "superseded queen" must necessarily be the old one. By fault of members, or reporter, or somebody, the language of the paragraph is phenomenally slipshod.

REPORTING THE HONEY-CROP.

As to the long and lively discussion of the question, whether we keep still about the facts when there's an extra-big crop, I think Mr. Wilcox got in the most important idea. Large dealers will know before they buy. Better for us, on the whole, that they know honestly and squarely from headquarters than that they discover that we are determined not to tell, and proceed to get at the facts in round-about ways.

Mr. Starkey is right, that there is a difference between reporting to dealers, and filling the ears of the public. General and miscellaneous cackling before the public—well, even the higher order of well-regulated hen knows better than to cackle by her own nest—silently scoots away to a distant locality and does the cackling there. But this Afterthinker believes that the public have *some* rights in the matter also—perhaps a little hard to determine exactly what they are. Pages 139-141.

EXACT POUND SECTIONS OF HONEY.

And so the innocent folks at the fair hadn't it in their hearts to doubt that the sections had an exact pound—but they really wanted to know how the bees knew when they had got just a pound in. There's childlike faith for you. Surely, we would do better to hold it than to dissipate it. Page 145.

"TALKING BEES" ON CITY STREETS.

Mr. Moore, at the Northwestern, told of a very pleasant way of advertising bees and honey. Don't remember to have read of exactly the same style before. Modify the observatory hive into a closed grip with glass sides, and holding two frames of brood and bees. Then go on the street of a city with it and talk bees—like Socrates at Athens talked religion. Mr. Moore found it very enjoyable—and liable to block the street if he staid too long in one place. Page 145.

PATIENCE, TALK AND WAITING—ESSENTIALS TO BEE-INSPECTORSHIP.

Yes, Mr. Hutchinson, three patient visits, lots of enlightening talk, and print, and waiting—and at last the man himself take hold and help clean up the foul brood—is better than "enforcing the law" as Old Adam within would say for us to do. "And fully as many thorns as roses" in ridding a territory of foul brood. Yes, we can find ourselves admitting that without argument. Page 146.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

When to Put Supers On.

When is the the proper time to put on supers? or how can you tell when to put them on? MISSOURI.

ANSWER.—When you see bits of white wax on the upper parts of combs it is high time supers were on. If white clover is your first surplus, put on sections as soon as it begins to bloom.

The Foul Brood Microbe.

Are scientists entirely agreed that foul brood is an animal growth as mentioned on page 230? SUBSCRIBER.

ANSWER.—No; I don't believe Mr. Aikin thinks so, as is shown later on by his speaking of the spore of foul brood bacilli as a seed, and comparing Bacillus alvei to a green growing plant.

Bees Breeding in January.

I would like to know how it is that my bees having brood in January. Some came out all right, while only one died on account of having zero weather. All the neighbor's bees died on the summer stands, while I lost one out of 21. I consider myself quite lucky. ILLINOIS.

ANSWER.—Very likely there is brood in your hives in January oftener than you suppose, as it is not such an unusual thing. It is possible that the unusually severe weather had something to do with it, for the colder the weather the warmer it is in the *center* of the brood-nest, just as the colder the weather the hotter the fires in your stoves.

Queens Not Obliged to Lay a Certain Number of Drone-Eggs.

Is it true that the queen is obliged to lay a certain number of drone-eggs, no matter what the bee-keeper does, as seems to be taught on page 211? SUBSCRIBER.

ANSWER.—The remark on page 211 was evidently made by a correspondent of the British Bee Journal, and it is a little strange that it should have been allowed the endorsement of silence in both the British and the American Journal, for I feel confident that neither of said journals believe in any such a doctrine. Full sheets of worker-comb given to a swarm will make sure the queen shall lay a very much smaller number of drone-eggs than she would if no foundation were given. A queen may be restricted to laying of a small number of drone-eggs, or she may be induced to lay a good many thousand.

Sectionless Supers of Honey—Entrance Feeding.

1. I have a colony of bees which were hived two years ago in a two-story hive, but instead of hiving them in the brood-chamber they put on the two supers without any sections in, so the bees began to build comb in the top, and now it is full of honey from bottom to top. What would you do with this? How would it do to smoke them down in the bottom and remove the supers? What would I find in the supers, brood or honey? If so, what time in the spring should I do it? It is not a chaff hive.

2. I am feeding a few colonies of bees that I have in the cellar, by placing a little liquid honey in a tin trough and shoving it in the entrance. They seem to take away a great deal of honey from this trough. Is this way of feeding them all right? I don't know anything about a bee-feeder. IOWA.

ANSWERS.—1. They have probably consumed quite a little through the winter, and it is possible that enough has been emptied out so that part or all of the brood-nest is above. You might raise the upper part and find out where the brood-nest is. Then leave on the stand the part that contains the brood-nest, whether it be the upper or the lower. If it be the upper, and you want combs in better shape, wait till three weeks after swarming and then transfer, in the meantime giving the bees a super, or supers, to store in. If, upon examination, you find the brood below, and the upper part pretty well filled with honey, you might leave it till entirely filled, and then take the honey.

2. The less bees are disturbed in the cellar the better, and unless you think they are in actual need don't feed.

Spring Stimulative Feeding.

I want information in regard to feeding bees in the spring, so as to stimulate brood-rearing. How shall I proceed, especially when to commence, and what precautions to use? OHIO.

ANSWER.—Without a good deal of experience you may do more harm than good. Don't begin till bees fly freely; feed about half a pound diluted honey or a syrup of sugar and water half and half—the honey is better. Feed in the evening for fear of robbing. Every other evening will do. It will do no good to feed when the bees can get even a moderate amount among the flowers.

Getting Into Bee-Keeping Again.

On page 182, I notice your article on "Bill of Rights to Protect Bee-Keepers in Priority of Location." I am a reader of the American Bee Journal, and an ex-bee keeper, as it were. How am I to get into bee-keeping honorably, and without intruding on the rights of any-one? ILLINOIS.

ANSWER.—One way is to buy out some one already located. Another way is to settle where the ground is not already occupied. Start right where you now are, if the field is not already occupied. It ought to be so arranged that any one could start in bee-keeping just as he can at farming, with no doubts whatever as to the matter of honor and rights. Pity that it is not so.

Position of Hives—Spring Feeding, Etc.

1. I have only 3 colonies of bees, and all in home-made boxes. The other day I found the hive empty of bees, but the box half full of honey. The bees were there about two weeks ago. I suppose they lost their queen. I want to get frame hives this summer.

2. Is it necessary to stand them up off of the ground?

3. Which are the most used, and the best hive?

4. Is it necessary to feed bees in the spring? If so, at what time?

I have had bees for some years, but have not attended to them as I should. I had to kill them when I wanted honey. I will have a great deal to learn about bees in order to make them pay. MISSOURI.

ANSWERS.—1. It isn't at all certain that the queen was lost. Hundreds of colonies with good queens have died during the past few weeks.

2. In most localities there is no need to raise hives any higher than enough to keep from rotting the bottom-boards, say 4 to 6 inches.

3. Plain dovetailed hives are probably as much used as any, and as good.

4. It is not necessary to feed them if they have abundance of of stores. If they have not, they can be fed any time they are short of stores.

Noisy Colony—Other Questions.

1. What is the cause of a noisy colony when the rest are quiet? The colony is dead now. It gave me only one super of honey, and they stored almost all of it before they swarmed. They crowded the brood-nest. The queen was all right, as far as I could tell.

2. How would it be to divide the brood, and give each a laying queen?

3. How many frames does the average colony occupy?

4. What percent of your queens occupy more than 8-frames? (I have seen a two-story Danzenbaker hive filled; also her daughter did the same.)

5. Does a queen usually reproduce herself? MINNESOTA.

ANSWERS.—1. Possibly queenless; possibly something else?

2. Unless the colony be very strong; indeed it would be better to keep all together till later.

3. Perhaps six; some only half that, and some twice as many.

4. I cannot tell; none of them are allowed to have more than 8 frames while working on sections, but if given a fair chance probably few of them would stop at 8, and some would occupy 16 or more.

5. No.

Trying to Avoid Trouble.

I have 59 colonies which are heavy with honey, but the severe winter left them, or most of them, not so strong in bees. I have lost 4 colonies this winter.

I live in town and am afraid I will have trouble with my near neighbor about the bees. I have no neighbors on the west, it being a public highway, but on the north lives my near neighbor, and my garden and also an alley are between. Now, I have room for 150 colonies by setting a row along the alley, facing south, over near my neighbor, who says my bees are a nuisance. and that they bothered her last summer; that the bees were at her well thick, and came into her house. But they never got stung. Now, if I can keep my bees at home this summer I will move them in the country next spring. The alley between my neighbor's place is not used much; there are other ways to drive without going through near my bees. Now, if a team of sweaty horses were driven through the alley, and they got stung, would I be liable for damages? I do not want any trouble, but I am so situated that I can hardly better myself this spring. ILLINOIS.

ANSWER.—That alley being a public thoroughfare, no matter how little it is traveled, you are responsible for damages if your bees sting horses or people passing by. A close fence six feet high would help matters very much. You can do much to keep your bees away from your neighbor's well by providing one or more convenient drinking-places nearer home, getting them started early in the season, for once a habit of going to a certain drinking-place is formed they will continue to patronize that place throughout the season. An occasional present of honey to your neighbor will do no little toward making her less observant of the intruding bees.

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Nucleus Method of Incease.

On page 170, in answer to "Illinois," in further explanation of how you increased your 24 colonies to 184 last year, will you kindly give the following additional information:

1. How early in the season, in the vicinity of Chicago, would it be usually safe to draw brood and bees from strong colonies and put in a pile?

2. Would it be as satisfactory to make the nuclei at the time of drawing the brood and bees from the strong colonies? If not, why?

3. If making a pile is the best way, is it necessary to leave this pile for 9 or 10 days before breaking it up into nuclei?

4. From the fact that you visited the Hastings apiary only once in 9 or 10 days, I suppose you did not feed any of the nuclei. Would it help to feed a little?

5. In cases where you gave the nuclei queens, were they virgins or laying queens? If the latter, did you just run them in, or had they to be introduced in cages and the bees allowed to liberate them?

ILLINOIS.

ANSWERS.—1. I don't know. This year it may be two or more weeks earlier or later than next year. Seasons differ greatly. It may be somewhat safe to say, any time after apple-bloom when the colonies are *strong enough*, say when each colony has five or more frames of brood.

2. No; you take from the pile *queenless* bees which will stay better where put, and are ready to accept anything given to them in the way of queen or queen-cell.

3. It is more convenient for an out-apiary, although a modification might work as well in the home apiary.

4. Hardly, in a good honey-flow; with no honey coming in it would be very desirable.

5. Both ways to both questions. Laying queens were preferred if on hand; if not, virgins or cells; sometimes run in, sometimes caged, allowing the bees to liberate.

◆

What Caused the Bees to Die?—Transferring—Chilled Brood.

1. I am a beginner, and have 9 colonies of bees; 3 colonies died, although they had enough in every hive; the comb was moldy. We winter them on the summer stands. What was the cause of their dying? It was 17 degrees below zero a good many days. Do you think that was the cause?

2. Next winter I am going to put chaff around the outside, and shavings in the super. Do you think that is better than putting blankets over them.

3. I am going to transfer a colony from a box-hive to one with frames. When is the best time?

4. What is the lowest temperature they can hatch young bees?

5. In case of chilled brood will they work the dead larvæ out, or will they leave them in the cells? There were some dead larvæ in the colonies that died. I don't think it was foul brood, as it did not have any smell. ILLINOIS.

ANSWERS.—1. Yes, the bees probably starved with plenty of honey in the hive, because the cold continued so many days severe enough to keep them from leaving the cluster to get a fresh supply.

2. Blankets ought to be as good as chaff, or better, if enough of them, but chaff ought to be cheaper.

3. 21 days after swarming.

4. I don't know; with the thermometer away below zero they can have it quite warm in the center of the cluster.

5. They will clean up the cells all right.

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334 Dearborn Street, Chicago, Ill.

IMPORTANT NOTICES.

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National Bee-Keepers' Association
Objects of the Association.

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

Annual Membership Dues, $1.00.

General Manager and Treasurer—
N. E. FRANCE, Platteville, Wis.

☞ If more convenient, Dues may be sent to the publishers of the American Bee Journal.

Please mention Bee Journal when writing Advertisers.

FROM MANY FIELDS

Flavors of Honey.

On page 757 (1903) the Editor says: "Eucalyptus honey is delicious and of excellent flavor," etc. On page 106 you ask for more witnesses. In Southern California it is not considered a desirable table honey. For myself I do not object to honey flavored with eucalyptus, say about 5 percent.

On page 106, Mr. Hasty says: "Did we not years ago have samples of orange honey similarly too good?" Intimating that orange honey is not *good* honey. Orange honey here ranks with the best of honeys, will compare favorably with sage and white honey.

I do not say this to get up an argument as to which is the best honey. My experience is that the likes and dislikes of the flavor of honey, as well as almost anything else, are mostly due to the cultivation of taste. The worst feature here is, we do not get a great amount of surplus from the orange, as it blooms in late winter and very early spring.

J. W. FERREE.

Los Angeles Co., Calif., Feb. 15.

A Defense of the Sisterhood.

MY DEAR MR. HASTY:—I beg to ask you why you chose the part in the "Hyde Play" of a character so resentful, and who when disturbed by a discord or an untimely march played, forgets that he is well-bred and says some things that merit regret, and is prone to be too personal in a way that never does any good? I ask, how could you fancy yourself the right one in the right position to don such a character? (Pages 8 and 71, respectively.)

Kindly, Mr. Hasty, in the name of sisterhood, never again apply the name *critter* or *critters* to the women of our country. In kind remembrance of mother, companion and daughter, I say this.

How grand that you didn't gratify "Ne-

10,000 Plants for 16c

More gardens and farms are planted to Salzer's Seeds than any other in America. There is reason for this. We own and operate over 5000 acres for the production of our warranted seeds. In order to induce you to try them, we make you the following unprecedented offer:

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To every reader of this advertisement who will send us 5 cents in stamps to cover packing and postage, we will send FREE a 25 cent Gem Chick Marker, together with our beautiful catalog. Address

GEM INCUBATOR CO., BOX 52, DAYTON, OHIO

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braska's" desire for more witticism on "critter ballads" (page 73). You have merited respect. He undoubtedly is good-natured and jovial, and only regarded the affair as a tall joke.

It is very probable that a great many of us didn't like the "the tone" of the engravings you have mentioned, but it pleased our good editor, Mr. York, to display them, and to give Mr. and Mrs. Hyde such an introduction to the bee-world that would seem intended to bound them on to sudden fame.

Now, if a part of what was said seemed a little out of order, and space used unnecessarily, why wouldn't it be better to make known our grievances in kind sentences which we believe to voice the thought of the greatest number unbiasly interested, and Mr. York most certainly would gladly publish the same for us?

Let us be proud that most bee-keepers seem to be so unbiased, pious, and liberal-hearted with each other.

Have you every heard the story of the venerable old Tree who was so kindly advising the Buckwheat when a storm was at hand, to do as the grasses and flowers were doing—to close its flowers and bow its head? But the Buckwheat, in its haughty pride would not, thinking maybe it would be wiser for the others to follow its example. The storm raged, and the good old Tree observed from time to time, and saw the dear little Buckwheat vainly trying to hold up its own weak self against the great force of Nature, shafts of lightning and peal after peal of thunder that made the very earth tremble. After the storm the grasses and plants looked thankfully up to the Tree, and the flowers unfolded their beautiful colors, looking refreshed and brighter than ever. The Buckwheat was singed and blackened, which made the Tree weep, so that tears were falling from leaves which were still in humble attitude.

In this drama of life what position should we choose? Most of us, of course, to be found with the Buckwheat, flowers and grasses.

And then, certainly, all have heard of the contest between the Wind and the Sun in trying to prove which had the greater power, by each trying to cause an old gentleman to remove his great coat. The Wind in his blustering way failed. Then the Sun sent one of his warm rays down so kindly upon the man that he exclaimed, "I am melting!" and with that removed the coat.

Now, if I am "chased" I will try to escape to the venerable old Tree, and when safely in its branches learn of it. E. S. Roe.

Todd Co., Minn.

[This really belongs in the "Sisters" department, but as it is addressed to Mr. Hasty, we put it in this place.—Editor.]

Many Bees Lost in Winter.

We have had the worst winter here that I have ever experienced; ten weeks of sleighing, and more coming. The mercury has hovered around zero for weeks. The bees have not had a chance to fly this winter, so you can guess about how they will come out. My 85 chaff-packed colonies are half dead, up to date. They have eaten every drop of honey in their hives. We are laying large cakes of boiled-down sugar over the frames, hoping to bring a few colonies through. As near as I can learn, there will not be 5 percent left to tell the story in Michigan; so you can see there will be a lot of long-faced bee-keepers next summer in these parts. The honey crop was a fair one last season.

Orville Jones.

Ingham Co., Mich., Feb. 23.

Bee-Culture as a Side-Issue.

Twenty years ago I purchased a pound of bees with two combs of brood, and the same year increased to 4 colonies, and also got 30 pounds of honey. I commenced the year 1898 with about 30 colonies, lost 12 or 13 from starvation that spring, and fed 400 pounds of sugar to save the rest until the white clover blossomed. During the summer I caught 11 wild swarms in my own yard. One swarm I

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Marshfield Manufacturing Co.
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THE MARSHFIELD MANUFACTURING CO., Marshfield, Wis.

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You will save money buying from me. Catalog mailed free. Send for same.
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C. H. W. WEBER,
Office and Salesrooms—2146-48 Central Ave.
Warehouses—Freeman and Central Aves.
CINCINNATI, OHIO.

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caught in the Court House window, another one, that I got in June, I carried half a mile on my back through the main street. By fall I had 214 pounds of comb honey from this swarm. My bees increased to 48 colonies, and their united efforts furnished me with 3000 pounds of nice comb honey, which I sold in and around town for 12½ cents per pound.

I keep my bees in a small lot in town. I have a bee-house 52 feet long, 8 feet high, and 6 and 8 feet wide, double-decked. On the north side, back of the bees, is a passage-way in which I do all the work.

I lost a number of queens on their first flight last year, caused, I think, by having the hives so close together. I always winter my bees in the cellar, and have never lost a colony except through starvation. I ventilate the cellar with a boiler-flue.

I have received queens from the East, and from the South. My dandies are from Texas, and they are hustlers. I have various strains of bees, some practically non-swarming, while others who handle their bees in the same manner have swarms year after year. I have about 300 half-finished sections stored away. What shall I do with them?

A. C. Jackman.

Wright Co., Iowa, Feb. 24.

Report for Last Season.

A queen I got as a premium seemed to do well, although I got her late in June, and the honey-flow stopped the middle of July. I could not find out what her bees would do, but they are of a nice yellow-gold color. I always liked the Italians bees. I have no time for the black bees, although there are a lot of them in this part of the country; I never could handle them like the Italians. The first bees I had were blacks, but I Italianized them. I started in bee-keeping five years ago, with one colony of blacks, and I have been increasing slowly, I did not want to start in too fast. I now have 15 colonies and they are about all I can attend to with my farm work. I don't neglect the bees for all the farm work; I like it better than farming.

Here is a report of my crop: I had 11 colonies, in 1903, spring count, and got 1,000 pounds of comb honey, 400 pounds extracted, and increased to 15 colonies, which I put into the cellar last November. They are wintering in fine shape. I expect a good crop next season.

We have had a cold winter in northern Wisconsin.

The American Bee Journal helped me a great deal; it is well worth $1.00 a year. Some of my neighbors keep bees, but they don't take any bee-paper, and I cannot get them to subscribe, either; and they do not get any crop of honey from their bees. I intend to keep more bees in the future.

Edward Duax.

Chippewa Co., Wis., Feb. 26.

Races and Sizes of Bees—Bee-Keeping in Mississippi.

In answer to Mr. John Kennedy, of Adams Co., Miss., in the Bee Journal of December 31, 1903, I would say that when I commenced bee-keeping, in 1874, for many years I had only the black bee. There were no other kinds in the county. I then introduced two other kinds, a large brown bee and a very black bee of smaller size. The latter were very vicious. One colony was so combative that a Cyprain could not surpass them. I was compelled to kill their queen. The brown bees were remarkably gentle.

It is often remarked by bee-keepers here, that with an apiary of pure Italians they will gradually breed away all their yellow marks, as I noticed in an apiary in Arkansas, owned by a bee-keeper from the North, who had none but Italians. One cause, in my opinion, was mating with native drones from the forest.

In regard to size of bees, I have the three-banded, long-tongued Italians, that are even larger than our brown bees, and from their size are, therefore, longer tongued. My Golden Italians, Holy Lands, and Cyprians are smaller, and the Carniolans are about the same. The size of Mr. Kennedy's bees may result from the strain he purchased. I can

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20 Wood-bound 10-frame Zinc Honey-Boards .... 15c each.
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400 Good L. Brood-Combs .... 12c each.
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1 6-inch Comb Foundation Mill .... 15.00.
1 10-inch Comb Foundation Mill .... 25.00.
100 New L. 10 fr. Dovetailed Hives (each consisting of a Body, Cover and Bottom-Board—all nailed) .... 95c each.

If you order Combs and Hives, the Combs can be put right into the hives and shipped in that way. All the above can be shipped promptly, so long as they last. First come, first served. What do YOU want out of the lot? or do you want it all? (No order filled for less than $5.00 from the above list.) Also BEES AND QUEENS, and Stanley Queen Incubator. Send for free Circular

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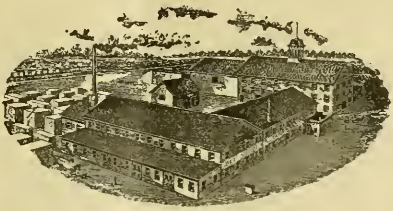

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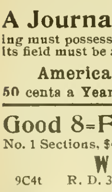

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see no difference in the honey-gathering qualities of the different kinds of bees, and for my use I prefer the native brown, and next the large, three-banded, long-tongued Italians. I also like the Carniolans for their gentleness, although they are somewhat over-rated.

No hill country, with subsoil of clay and marl can compare with the alluvial lands of the Mississippi River. While the atmosphere is moist, the rich earth produces more vigorous growth of vegation. The rainfall is conserved by our level porous lands, while the stiff soil of the hills retains but little moisture, especially as the water flows rapidly from them. Our hot southern sun soon dries up what moisture is left. I can not see why there is so small a honey-flow in the hills, except from the above causes.

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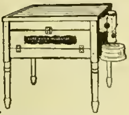

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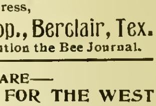

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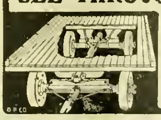

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Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Four percent off for cash orders in December.

M. H. HUNT & SON,
BELL BRANCH, WAYNE CO., MICH.

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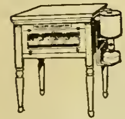
CHICKS GET BETTER START



in a Great Scott Incubator. No foul, dead air to kill germ or developing chicks. Eggs in a Great Scott get pure, warm air. Every corner at just right temperature. Great Scott chicks are hardy, strong, plump. Send for free, illustrated catalog—now.

Scott Incubator Co.
Box 93 Indianapolis, Ind.

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For Sale 2000 pounds Extracted Choice Clover HONEY in cases of two 60-lb. cans each; 8c per pound; two cans or more, 7½c per pound.

DANIEL S. KITSON.
11A4t R.F.D. No. 1, EAST JORDAN, MICH.

ITALIAN QUEENS, BEES AND NUCLEI

Choice home-bred and Select Imported Stock. All Queens reared in full colonies.

One Untested Queen	$1.10
" Tested Queen	1.65
" Selected "	2.20
" Breeder "	3.30
" Comb Nucleus (no Queen)	1.80

Tested Select Breeders and Nuclei ready now; Untested in May. Safe arrival guaranteed.

For prices on quantities and description of each grade of Queens, send for free Price-List.

J. L. STRONG,
204 East Logan Street, CLARINDA, IOWA.
12Atf Mention Bee Journal when writing.

Special Notice to Bee-Keepers

BOSTON

Money in Bees for you.
Catalog price on

ROOT'S SUPPLIES.

Catalog for the asking.

F. H. FARMER,
182 Friend St., Boston, Mass.
Up First Flight.

Please mention Bee Journal when writing.

Please mention Bee Journal when writing advertisers.

was destroyed by last year's overflow. Cow-peas sown thick are best for the hills, as they shade the ground perfectly and keep it moist, thus giving large yields of nectar. Mellilot sown thick may prove valuable. All in all, I would think the hills unfit for bee-culture, except in some extensive wooded creek-bottom. I cannot account for the difference in seasons in the hills of Adams Country, and our alluvial delta country, where we have only dry spells in August and rarely in September. We have great yields of honey in September and October from smartweed, golden-rod, swamp boneset, and asters.

Cedar or any other bark burns out too quickly. Hard wood is preferable for smoking to anything else.

O. M. BLANTON, M. D.
Washington Co., Miss.

CONVENTION NOTICES.

Connecticut.—The Connecticut Bee-Keepers' Association hold their spring meeting in the Capitol at Hartford, April 28, 1904, beginning at 10 a.m. All bee-keepers and their friends are cordially invited to attend. A question-box will be opened, and several interesting essays presented.

E. E. SMITH, Cor. Sec.
Watertown, Wis.

Pennsylvania.—At a meeting of the Muncy Valley Bee-Keepers' Association, held Saturday, March 19, a resolution was passed authorizing the secretary to publish a call for a convention of the bee-keepers of Pennsylvania to be held in the Court House at Williamsport, April 12, 1904, at 1:30 p.m., for the purpose of organizing a State Bee-Keepers' Association, and also for taking such measures as may be deemed necessary to secure legislation for the protection of bee-keeping interests, and the prevention and cure of bee diseases.

The importance of this matter is so great that every bee-keeper who sees this notice is urged to interest himself in this movement and attend the meeting, if possible.

By order of the Muncy Valley Bee-Keepers' Association.

D. L. WOODS, Sec.
Muncy, Pa.

If you want the Bee-Book

That covers the whole Apicultural Field more completely than any other published,
Send $1.20 to

Prof. A. J. Cook, Claremont, Cal.,

—FOR HIS—

"Bee-Keeper's Guide."

Liberal Discounts to the Trade.

Bee-Keepers!

Send for our FREE CATALOG. It will tell you how to put foundation in four sections at once; and the only way to get a full section of honey

We sell SUPPLIES AT FACTORY PRICES.

A. COPPIN, Wenona, Ill.

4Atf Please mention the Bee Journal.

Wholesale Honey.

We need a few thousand pounds more of Comb Honey for our trade in Kansas City and Omaha. Any person, any where, who wants to cash up his Honey Crop at a wholesale price, we would be pleased to hear from, with complete description and lowest price delivered to their depot. West of Kansas City and Omaha it should be in car-lots.

THOS. C. STANLEY & SON, Manzanola, Colo.

WANTED! FANCY COMB **HONEY**

In no-drip shipping-cases. Also Amber Extracted in barrels or cans. Quote your best price delivered Cincinnati. The Fred W. Muth Co.

32Atf Front and Walnut, CINCINNATI, OHIO

HONEY AND BEESWAX

When consigning, buying or selling, consult

R. A. BURNETT & CO.,
199 SOUTH WATER ST. CHICAGO, ILL.

Please mention Bee Journal when writing.

HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, March 8.—It is difficult to get more than 12c per pound for any lot of white comb honey, with sales chiefly at 11c; even at this price it does not work off as fast as owners wish it would. Selections in the most desirable grades bring a little higher price in small quantities: off grades sell at 1@2c per pound less. Extracted honey plentiful and slow of sale; white brings 6@7c; amber, 5@6c, according to quality and style of package. Beeswax active at 30c.

R. A. BURNETT & CO.

CINCINNATI, March 19.—The honey market continues to be dull, and if anything the prices on comb honey are lower; concessions are made on bigger lots. I quote: fancy white comb from 12½@14c. Sales on extracted are made at the following prices: Amber, in barrels, 5¼@5¾c; in cans, ½c more; alfalfa, water-white, 6@6½c; strictly white clover, for extra fancy, 7½@8c. Beeswax, 30c.

C. H. W. WEBER.

PHILADELPHIA, March 21.—The season for selling honey has been prolonged on account of the cold weather, which has certainly been very fortunate for the bee-keeper, as there never was as much honey shipped in so late in the season to be disposed of. It has broken the price quite considerable, but there is still quite a demand, which otherwise would have fallen off. We quote: Fancy white comb, 13@14c; No. 1, 12c; amber and buckwheat, 9@10c. Extracted, white. 7@8c; amber, 6@7c. Beeswax in good demand, 31c. We are producers of honey and do not handle on commission.

WM. A. SELSER.

CINCINNATI, Mar. 4.—The demand for honey is brighter than it has been in the past 60 days. We continue to offer amber extracted in barrels at 5½@6½c, according to quality. White clover extracted is a drag on the market at 6½@8½c in barrels and cans. Comb honey seems to be reviving at 13½@15c for fancy.

Beeswax, 30c. THE FRED W. MUTH CO.

ALBANY, N. Y., Mar. 25.—Honey market dull and getting late; demand falling off for comb honey now. So much comb honey is out of condition, being candied hard in the combs makes most unsalable. We quote: 8@12c; nominal now. Extracted, white, 6½@7c; amber, 6@6½c; buckwheat, 5@5½c. Beeswax, 28@30c.

H. R. WRIGHT.

BOSTON, March 22.—There is nothing new to note, either regarding the condition of our honey market or prices. The demand is naturally not so heavy as it was, owing to the warmer weather and the near approach of the maple sugar season. Prices remain same as before, which are as follows: White in glass-front cases at 16c; No. 1, at 15c. Supply is ample, and demand light at this time. Extracted, water-white, 8c; light amber, 7@8c; with but little call for dark Florida.

BLAKE, SCOTT & LEE.

KANSAS CITY, March 22.—The demand for honey, contrary to the usual market conditions at this time of the year, is slow, and only very low prices will induce the trade to buy in large quantities. Fancy comb honey is selling at $2.25; No. 1, from $2.00 to $2.15; amber honey and combs that are not well filled are selling at just what prices the trade will pay. Extracted honey is moving very slowly: there is very little demand for amber, and white is selling at 6@6½c. No demand for barreled honey.

C. C. CLEMONS & CO.

NEW YORK, March 7.—The market on comb honey is decidedly dull. There is some demand for white honey, but prices are ruling rather low. We quote fancy at 13@14c; No. 1, at 12c; amber, at 11c, and in round lots even these prices have to be shaded in order to effect sales. There is no demand at all for dark and buckwheat comb honey, and it looks as if some of it would have to be carried over. We quote nominally at 9@10c per pound.

There is a fair demand for extracted honey, at irregular prices, fancy white bringing 6½@7c; light amber, 5½@6c; other grades, 5@5½c; and Southern, common to fair, 50@55c per gallon. Beeswax firm at from 29@30c.

HILDRETH & SEGELKEN.

SAN FRANCISCO, March 16.—White comb, 1-lb. frames, 11½@12c; amber, 8@10c. Extracted, white, 5¼@5¾c; light amber, 4¼@4½c; amber, 3¾@4¼c; dark amber, 3¼@3¾c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

Market is very quiet. Offerings are of fairly liberal proportions for this late date in the season. Quotations remain about as previously noted, but the extreme figures quoted are based mainly on the views of holders.

PERFECT GOODS!
LOW PRICES!

A Customer Once, a Customer Always.
We manufacture

BEE-SUPPLIES
OF ALL KINDS.
(Been at it over 20 years.)

It is always BEST to buy of the makers.
New Illustrated Catalog Free.

For nearly 14 years we have published

The ÷ American ÷ Bee-Keeper
(Monthly, 50c a year.)

The best magazine for beginners, edited by one of the most experienced bee-keepers in America. Sample copy free.

Address,
The W. T. FALCONER MFG. COMPANY
JAMESTOWN, N. Y.

W. M. Gerrish, Epping, N. H., carries a full line of our goods at Catalog prices. Order of him and save the freight.

I. J. STRINGHAM, 105 Park Place,
NEW YORK

Manufactures and carries in stock every artice a bee-keeper uses. BEES AND QUEENS IN SEASON.
Apiaries—Glen Cove, L.I. Catalog free.

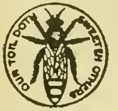
ST. LOUIS, 1904.

Bee-Keepers' Supplies Galore.
Catalog Free.
A No. 1 Smoker by mail, $1.

Bees, Honey and Beeswax bought and sold for cash.

LEAHY MFG. CO.,
1 ALTA SITA, EAST ST. LOUIS, ILL.
Please mention Bee Journal when writing.

A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.


OUR TOIL DOTH SWEETEN OTHERS

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10c; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

Bee-Supplies!
G. B. Lewis Co's Goods.

Don't Wait Any Longer to Buy.
Big Discount for Orders Now.

Write us to-day and say what you want, and get our prices. New catalog of 84 pages; it is free.
We also handle the famous
Hoosier Incubators and Brooders.

C. M. Scott & Co.
1004 East Washington Street,
INDIANAPOLIS, IND.

Please mention Bee Journal when writing.

Experienced Man Wanted

to work with bees. Address with references and experience, Dr. Geo. D. Mitchell & Co.
13A2t 341 Fourth Street, OGDEN, UTAH.

E. E. LAWRENCE, DONIPHAN, MO.
(Box 28), breeder of
Fine Italian Queen Bees
Orders booked now and filled in rotation. Send for price-list.
Please mention Bee Journal when writing.

27th Year **Dadant's Foundation** 27th Year

We Guarantee Satisfaction. What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS. PATENT WEED-PROCESS SHEETING.

Why does it sell so well? Because it has always given better satisfaction than any other. Because in 26 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material.
We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies
OF ALL KINDS.

Langstroth on the Honey-Bee—Revised
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

DADANT & SON, Hamilton, Hancock Co., Ill.

Please mention Bee Journal when writing.

Our New Wisconsin Hive.

Up-to date in every respect. All the important features of the regular dovetailed hive, with additional advantages of a portico front.

Supers arranged for 4¼x4¼x1⅞ Beeway, 4¼x4¼x1½ Plain, 3⅝x5x1½ Plain, or 4x5x1⅜ Plain Sections.
Fully described in our new 1904 Catalog.

G. B. Lewis Co., Bee-Keepers' Supplies, Watertown, Wis, U.S.A.

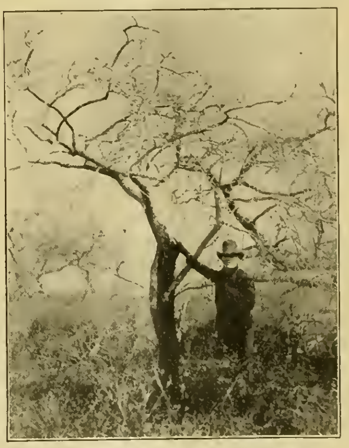
AMERICAN
BEE JOURNAL

44th Year. CHICAGO, ILL., APRIL 14, 1904. No. 15.

An Octogenarian Bee-Keeper and Wife—Other Pictures.

(See page 276.)

MR. AND MRS. S. B. SMITH.

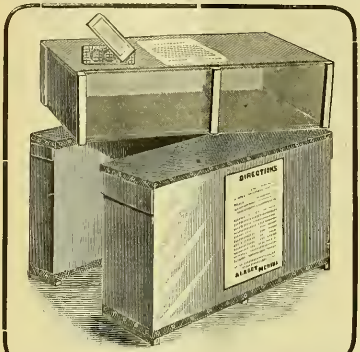


THE CATCLAW OF TEXAS.

No. 1.—APIARY OF F. J. STRITTMATTER.

No. 2.—SWARM RETURNING TO OLD STAND.

Have You Lost Your Bees?



SHIPPING BOXES FOR BEES.

Save Your Combs.

The winter losses in some parts of the country are heavy, and the demand for bees and queens will be large. Parties needing queens should send their orders at once, and state date when shipment is desired.

Early Italian Queens.

We are fortunate in being able to offer for April and May delivery a large stock of queens from our Southern breeders. While we have a much larger supply than ever before, it is highly important that you send your order at once to secure the queens when desired, as we will fill orders in rotation. We expect to be able to furnish untested queens from our Southern yards, in any number, after April 10th. Send your orders at once.

Prices of pure Italian Queens, untested, from our Southern yard for April and May shipment.

	1	12	50	100
Untested	$ 75	$ 8.50	$35.00	$ 65.00
Select Untested	1.00	11.50	47.50	77.50
Tested	1.50	17.00	70.00	130.00
Select Tested	2.50	28.50	——	——

Prices of Our Red-clover and Honey Queens.

Untested queen	$ 1 00	Select tested queen	$ 3 00
Select untested queen	1 25	Breeding queen	5 00
Tested queen	2 00	Select breeding queens	7 50
Extra select breeding queen, one year old			10 00

We book orders, and fill in rotation.

Imported Italian Queens.

We are prepared to furnish from the best breeders in Italy, imported Italian queens. They are put into our own yards and tested before sending out. We have only two grades—best, and fair imported, and prices are given in the table below.

Best imported queens	$5 00	Fair imported queens	$3 00

The Root Queen-rearing Outfit.

In this outfit are embraced the best points of the best systems in use. It will give satisfaction to the amateur as well as the expert. The cell-cups are made of wood, wax-coated. No melted wax is used in their manipulation, as they are attached to the cell-stick by means of a small nail-point.

The nursery-cage combines the features of nursery and introducing cages. By their use a queen can be released on the candy plan or caged in the hive as desired.

In connection with the outfit goes a booklet on queen-rearing—one which ought to put the veriest amateur on the high road to success. Outfit comprises three cell-bars with 50 waxed wooden cells, one frame of cages (18), one cell-forming stick, set grafting-tools, and a book on queen-rearing..................$4.50

If sent by mail, add 50c for postage.

Tools for Queen-breeders.

Wooden cell-cup with point for attaching to bar, 50c per 100; $4.00 per 1000.

Same, waxed ready for use, 75c per 100; $6.00 per 1000.

Titoff wire nursey-cages, 15c each; $1.35 per 10; $12 50 per 100.

Frame for holding 20 cages, including cages, $3.00.

Cell-stick, 10c each; $1.00 per dozen.

Transferring needle, double-ended and nickel-plated, 15c.

Jelly-spoon, nickel-plated, 15c each.

We can supply, also, fine-pointed lace-scissors with extra large bows, for clumsy fingers, at 35c each.

Nuclei and Colonies of Bees.

We are prepared to furnish one, two, and three-frame nuclei and full colonies of bees in eight-frame Dovetailed hives or Danzenbaker hives. The nuclei are put up in light shipping-boxes made of basswood, the sides of which are only $\frac{3}{16}$ inch thick, and the ends $\frac{1}{2}$ inch. The top and bottom are covered with wire cloth. This makes a very light package, affords plenty of ventilation, and is strong enough to stand shipping 500 to 1000 miles.

Any of our nuclei, even the 1-frame, will make good strong colonies by fall if properly handled. The three-frame if properly managed can be increased four, five, or even ten full colonies by fall if bought now; and instead of having any black bees, one will have in the beginning pure Italians of the choicest stock throughout his apiary.

PRICES OF NUCLEI.

One-frame nucleus without queen	$2 00
Two-frame " " "	3 00
Three-frame " " "	3 50
Full colony in 8-fr Dovetailed hive	7 50

We can furnish with the nuclei any queen mentioned in the table of prices of queens.

One-frame Nucleus--This contains a frame partly filled with brood and bees. The condition of the hives at different seasons f the year vary so that we can not always put up nuclei in the same way; but in every case we aim to give full value. Weight about 7 lbs.

Two-frame Nucleus--This is just the same as our one-frame nucleus, except it has twice the amount of bees or brood, or of both. The box is larger, and holds two frames—one full frame of brood, or two frames partly filled. Shipping weight, about 10 lbs.

Three-frame Nucleus--This is three times the size of the one-frame nucleus, and is made up in the same way as the one and two frame. Shipping weight, about 15 lbs.

A Full Colony will contain 8 Langstroth frames in Dovetailed one-story hive—three full frames of brood, or equivalent, in six combs, and enough bees to cover fairly all the combs. No queen is furnished at the table price. Purchaser is to seclect the queen and add her price to that of the bees. Our colonies are all put up in new Dovetailed or Danzenbaker hives, painted two coats. Shipping weight about 40 lbs.

Special Offer!

Gleanings in Bee Culture one year, and one untested Italian Queen from our Southern yards..............................**$1.00**

We begin shipping at once. Orders filled in rotation. Do not ask for special arrangements; at this low price we can't make exceptions.

Gleanings in Bee Culture one year, and one untested Red-clover Queen for **$1.50**

We begin shipping these queens about April 15. Orders filled in rotation.

Guarantee.

We agree to deliver queens in good order to any part of the United States or Canada, from April 15 to October. In case of queens valued at $5 or more, we ship in a one-frame nucleus, (no charge for nucleus). If a two-frame or three-frame nucleus is wanted, add to the price of the queen the difference in price between the one-frame and the two or three-frame. Losses must be reported on arrival.

We can make Shipments of Nuclei from

Cincinnati, Ohio, Philadelphia, Pa.,
New York City, Medina, Ohio,
Wharton, Tex., High Hill, Mo.,
St. Paul, Minn., Augusta, Kans.

This will give you very low Express Rates.

THE A. I. ROOT COMPANY,

BRANCHES: **Main Office and Works, Medina, Ohio, U. S. A.** **BRANCHES:**

CHICAGO, ILL., 144 East Erie St.
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ST. PAUL, MINN., 1024 Miss. St.
HAVANA, CUBA, San Ignacio. 17
San Antonio, Tex., 438 W. Houston.
Washington, D.C., 1100 Md.Av., S.W.

ESTABLISHT IN 1861
AMERICAN
THE OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL
Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

GEORGE W. YORK, Editor. CHICAGO, ILL., APRIL 14, 1904. Vol. XLIV—No. 15.

Editorial Comments

$101.10 in One Season from One Colony.

This S. R. Ferguson reports in Gleanings in Bee-Culture as having occurred with him some years ago. The season was remarkably good, the one colony, which cost him nothing, increased to nine, which he sold for $45.00, and he sold all the honey at 20 cents a pound. But after trying in vain to repeat anything like it in after years, he concludes that unusual conditions just made it happen so. A very important factor in the case he does not mention: The fact, at least the probable fact, that that colony had the field pretty much to itself.

Passing of the House-Apiary.

Years ago great things were claimed for the house-apiary. Then it passed into disrepute, and for a time little was said about it. Within late years interest revived, a few men claiming to make a success of it. Conservative bee-keepers still felt like advising against it, but the one thing in its favor to which it was difficult for them to make reply was the enthusiastic success of F. A. Salisbury. In a late Gleanings of Bee Culture is given the following conversation between Editor Root and Mr. Salisbury:

> "But, say, Mr. Salisbury, where is that immense house-apiary that you had the last time I was here?"
> "Torn it down."
> "What for?"
> "Bees died too much in winter in it. Say," he said looking at me, "I wish you would take that picture of that house-apiary of mine out of the next edition of your A B C book. I am afraid some other man will be fool enough to make one like it, and then blame me."

That tells the whole story. A house-apiary is a good thing to let alone.

Mating 300 Queens with Bees of One Colony.

Such is the rather striking condensed title of an article in the Bee-Keepers' Review, written by W. H. Laws. No *permanent* nuclei are used, a single frame of *honey* being used for each nucleus, in a box made after the following fashion:

> "Imagine two little trays, ¾ inch deep, 11¼ inches long and 4¼ inches wide, hinged at the bottom with leather strips, and made so as to clamp a little frame (of the same dimensions) of honey, between them, so tightly that it cannot move. The outside surface of the frame becomes a part of the box, and all is held fast by a spring hook and staple at the top. The hook fits so snugly that it goes on with a snap. An entrance for the bees is made in the end-bar of the frame by boring with a 5-16 inch bit through the end-bar of the frame, near the lower corner. A little zinc button is used; one end solid zinc for closing the entrance, the other a single queen-excluding slot; and when the button is turned crosswise, the entrance is then wide open:

To populate these little boxes, proceed thus:

> "Shake all the bees from the combs of a populous, *queenless* colony (after making the bees fill themselves with honey), putting the beeless combs into an empty hive, and setting it on the old stand, to which enough bees will return to care for the brood.
>
> "Now move the old hive, containing the honey-laden, queenless bees, to some shady, convenient spot, and, with a small tin cup, dip from the cluster a small wad of bees, say about the size of an unhulled walnut, containing about 100 to 150 bees, never more than 200; open one of these little boxes, and pour the bees right into the box, upon the comb of honey, close the box, snap the hook and lay it aside. Keep on dipping and filling until all the boxes are filled. The bees, being loaded with honey, dip nicely, and, not being able to climb the the smooth inside of the cup, they handle about like so many beans.
>
> "Soon the bees in the boxes are all buzzing and roaring, and thus lamenting their queenlessness and confinement, when we are ready to introduce the virgin queens, which is done by running them into the little, 5-16 inch, round entrances to the boxes.
>
> "When the virgins are all run in, and the entrances closed, the boxes may lie in the shade until the evening of the next day, or even 48 hours, and no harm will come.
>
> "The bees, being queenless and confined, always accept the virgin given, regardless of her age, or from whence she has come. Long ago I discovered that almost any *confined* bees will accept any kind of a queen, provided she is given *immediately* after the bees have discovered their confinement."

Twenty-four hours later, the bees have become reconciled, and the nuclei may be carried out 300 or 400 yards, and the entrances opened as they are scattered under the brush, in the forks of trees—anywhere in any position, only be sure they are in the shade, where they remain a few days until the queens are laying. Virgins five to seven days old when given may be expected to be mated the next day after the nuclei are distributed, and after the third day the little zinc slots can be turned over the entrances so as to prevent absconding. Mr. Laws says there is no danger of absconding before mating.

When the queen is laying, the box is emptied, and a *fresh* lot of bees used for another virgin. With fresh bees always used, there can be no trouble with laying workers.

The Bees of India.

Recently we received the following letter from Mr. C. Hodgkins, of Cheshire Co., N. H.:

> EDITOR YORK:—I enclose a letter I have received from India. The writer of the same is a missionary of the Methodist Church. He wrote me other letters about his work, and I made inquiries about the honey-bee. This is what he wrote to me.
>
> Yours truly, C. HODGKINS.

The letter referred to by Mr. Hodgkins reads as follows:

> MY DEAR MR. HODGKINS:—The honey-bees are very common in India, and honey is plentiful. The following are the principal honey-bees: Apis dorsata, Apis bicolor, Apis indica, Apis nigripennis, and Apia socialis. Most of these are domesticated.
>
> In the hills the native pierces a hole about six inches in diameter in the wall of his house and closes the inner hole with a plate. When the bees fill the hole with comb, the native removes the platter and blows the fumes of burning coal into the hole, and this drives away the bees. He takes away ¾ of the honey, and again closes the hole.
>
> Honey sells for about 8 cents per pound, and clean wax for the same price. There are some bee-hives in use, but not many. I have seen them in the mountains.
>
> I have sent to the mountains for some live bees, and when I get them I will forward them by post to you. Yours truly,
>
> Cawnpore, India. (REV.) R. HOSKINS.

Cutting Candied Honey with a Wire.

Many of us have known from childhood the trick of cutting soap with a thread or string, but Mr. Jesse Warren seems to have been the first one to think of applying it to honey. Gleanings in Bee-Culture says:

> He takes a can of honey that he *knows* is candied *solid and hard* to hold its shape. He then takes a pair of tinner's snips, cuts the tin down the sides, and then pulls it off from the cake of honey. He now takes a piece of iron or steel wire, about No. 20, or a small strong fishline a yard long. To each end of this is secured a wooden handle. The cake of solid honey is laid on its side on a board, when he slips

the wire under the cake, back, say, two inches. He draws it around the cake, crosses the two ends of the wire, grabs the handles, then pulls slowly, when the wire passes easily and nicely right through the whole cake. A paddle or thin-bladed knife is then inserted in the crack where the wire passes, cleaving a slab of honey two inches thick, the size of the top of the square can. Another slice is taken off in a like manner. These slabs are then resliced the same way into one-pound bricks. They are next wrapped in paraffin paper. Another paper wrapping with suitable label, and directions how to handle, makes a very neat and pretty package that costs almost nothing. The only expense is the sacrificing of the can. But this is offset by the saving of the labor of melting the honey to get it out, and then re-candying after it is poured into paper bags.

Editor Root suggests that two-inch cubes of honey sold at 5 cents each would be a profitable thing, amounting to 13½ cents a pound.

Why could not a series of wires, after the manner of a gang-saw, make a wholesale business of cutting?

Miscellaneous Items

Wisconsin Bee-Keepers, in the locality of Glenwood, Saint Croix county, will meet in Gymnasium Hall, at Glenwood, April 18, at 10 a.m., for the purpose of organizing a bee-keepers' association. Headquarters will be at Central Hotel, and meals 25 cents. General Manager France will be present. It is hoped that every bee-keeper that can do so will be there. For further information, address Leo F. Hanegan, of Glenwood.

* * *

Mr. Geo. W. Brodbeck, Secretary of the National Bee-Keepers' Association, writing us March 30, said that it was an error, published some time ago, that he "had almost recovered" from his long sickness. He says:

"I have been in the house now for three months, and with the best of care in every way possible I am only strong enough to walk about the house, so you see my sickness was a severe one, and my recovery slow. I thank God, though, every day, that I am coming out of this so nicely, and the present conditions seem to indicate that I will be in much better shape physically than I have been for years."

Surely, all will rejoice with our good friend Brodbeck, over the excellent prospect of his speedy and complete recovery. The world needs him, and more like him.

Mr. B. is planning the program for the next National convention, to be held in St. Louis likely some time in September. The exact date is not yet fixed. But all bee-keepers will do well to arrange their affairs so as to be present when the time comes.

* * *

"Critters," Bees, Honey, and Catclaw.—We have received the following from Mr. H. H. Hyde, of Wilson Co., Tex., dated Feb. 10:

Mr. Editor:—Honor bright, now, don't you think it time for me to be after that Yankee "critter" that has been so "Hasty" as to get off that horrid attempt at poetry, on page 8? and then goes on, and, to tell you the truth, can't say complimentary or not. Well, Mr. Hasty, look out! If ever you get very far South I "have it in for you" now, and will put all those "critters" onto your trail, and make it hot for you, sure. But let me tell you, they will not run you off if you will be nice, and not use too much smoke, especially of the wrong sort.

I see on page 71 that that Hasty man leaves the impression that those Holy Land bees are on their good behavior, and that they have been especially treated for the occasion. Not so, Mr. Hasty. Pure Holy Lands are as easy to handle as, if not more so than, the average Italians. Yes, I would rather handle them. That picture was taken because so many erroneously believe them to be vicious. The Cyprians are a very different race, and while they may be slightly superior in a few respects, their bad temper leaves them out of it for me.

I note also that Mr. Hasty says that the mesquite hardly looks as he thought. Let me say that you can form but very little opinion of it from the pictures shown.

On page 72 the same chap takes me to task about bulk comb honey. Yes, Mr. Hasty, we need the pure-food law that has passed the Lower House again, and let us all pull for it. With this law we can pack our bulk comb under the law, and doubts of its purity will cease.

Now, as to that non-granulating sort of honey: Yes, sir, we have a method we are experimenting with that will enable us to pack the honey so that it will not granulate for several months, and we have the question solved, whether or not we get the pure-food law. You speak of the bicycle hobby catching cold, and hint that bulk comb may do likewise. Well, it is a fact that last year we had a little over-production, and some have their honey yet; however, if not sold as bulk comb it's an easy matter to extract the honey and sell in that form. As soon as we extend our selling territory—and we are fast doing it—we shall have a market for all we can supply. We are now looking towards suitable glass packages for small amounts, and we expect by their use to increase the market materially. Wherever once introduced, bulk comb rapidly gains favor and headway.

Mr. Hasty, to refer again to the Holy Land bees, let me give you a record. First let me say that our average spring count last year was about 70 pounds per colony. We had one apiary of pure Holy Land bees in an average location—certainly not better than any other, and not as good as some of our locations, if I am a judge of localities in this county. This apiary consisted of 85 colonies in 8-frame hives, spring count. They were transferred into 10-frame hives, and we sold 50 full colonies, and closed the season with 133, or about 115 percent increase. We took off some 8000 pounds of comb honey, valued at $600 from this apiary. How is that? Counting increase at $5 per colony, it amounts to about $15 per colony revenue, counting spring count.

I also note that Mr. Hasty is interested in Western honey-plants, judging from his remarks. Here is a picture of one of our honey-plants—catclaw. This was taken a few days ago, and you may judge of the size of the plant by the young man in the picture. I will say, however, that catclaw is usually not so tall, running all the way from 3 to 10 feet in height.

Nearly all the small bush in the picture is honey-yielding. Imagine what a honey country we have!

Well, Mr. Hasty, I am coming North some of these days, and will take the liberty in advance to tell you that I shall call on you.

Homer H. Hyde.

* * *

Mr. and Mrs. S. B. Smith, of Millelacs Co., Minn., are "portraited" on the first page. When sending the picture, Mr. Smith wrote as follows, March 2:

Editor York:—I send you a photograph of myself and wife. Mrs. Smith can work among the bees and handle them just as well as myself, and she takes great interest in them. We wanted a picture of our apiary taken, with ourselves among the bees, in the working season, but it was so difficult to get an artist to do it that we gave it up.

I will be 80 years old next month, and Mrs. S. will be 75 in November. We were married 58 yeays ago last November, and have kept bees for over 50 years, and have become so attached to them that we can't think of living without them. I can't call to mind the date when I commenced to take the American Bee Journal, but it was many years ago, and I intend to take it to the end. And our age admonishes us that the end is not far off, but we commenced over 60 years ago to lay up treasures in that Country to which we are traveling, and are ready to go when we are called. S. B. Smith.

* * *

Mr. F. J. Strittmatter, of Cambria Co., Pa., whose two pictures appear on the first page, wrote us as follows when sending them:

Editor York:—I send two photographs which I took last August. I am a beginner both with the kodak and with the bees.

I became interested in bees about six years ago, but circumstances would not permit me to engage in bee-keeping until the spring of 1902, when I purchased two colonies in 8-frame chaff hives.

Previous to this time I had carefully read "Langstroth on the Honey-Bee," and four or five pamphlets on bee-keeping, as well as one of the leading bee-papers for about 18 months. I increased to 7 colonies by the fall of 1902, and took 191 pounds of comb honey, besides losing one good swarm that went to parts unknown, May 31.

I commenced the season of 1903 with these 7 colonies, and turning to my apiary record I find I had a natural swarm May 7, and by May 16 my 7 colonies had all swarmed. The swarms were hived on the returning plan (the queens' wings having been previously clipped). I then run the swarms for honey, and the parent colonies mostly for increase. By May 26 I had divided the 7 parent colonies, making 15 nuclei. One of these nuclei formed May 26 with 4 combs of brood and placed in a 10-frame chaff hive was run for honey, and gave 105 pounds of comb honey in sections, and 30 pounds of extracted. (This colony was fed back 15 pounds of granulated sugar.)

All of my increase was put into 10-frame hives, and I feel convinced these are none too large in my locality, even for comb honey—indeed, many of my queens were crowded in them. Several queens kept 9 combs filled with brood to within about ¾ inch of the top-bars, and the 10th one fully two-thirds filled, throughout most of the breeding season. And these were the colonies from which I got immense returns, for this locality. In one of my 8-frame hives the queen filled the 8 combs with brood and also about 7 of the sections.

In all, I increased from 7 colonies to 50, and took 714 pounds of extracted and 600 pounds of comb honey.

I used full sheets of foundation in all the brood-frames, purchased about 20 queens, and fed 300 pounds of sugar for winter stores.

I sold about all my comb honey at wholesale, at 17 cents per section, or about 20 cents per pound; and the extracted found ready sale in Mason quart jars at 40 cents per jar. Of course, a very large crop could hardly be sold at such prices.

Photo No. 1 shows the greater part of my apiary. The hives face south. No. 2 shows a swarm returning to its old stand.

I am much pleased with the "old reliable" American Bee Journal. I read regularly four bee-papers, and have most of the bee-books published in this country.

I wish to emphasize the importance of keeping a record of all colonies of bees.

In picture No. 1 will be seen, in the foreground, an apiary stool and a tool-box standing on a hive-cover. F. J. Strittmatter.

Contributed Articles

Making Frames, Hives, and Supers.

BY EDWIN BEVINS.

A FEW weeks ago a far western bee-keeper wrote lamenting the low price of honey and the advanced and advancing prices of hives and other bee-supplies, and asked what the bee-keeper is to do in order that he may get a little profit out of the sales of his product. For the purpose, I suppose, of helping this man and others like him out of his bewilderment, Editor Hutchinson suggested that bee-keepers may do some things to cheapen the cost to them of things they have to use. Among other things, Mr. Hutchinson said they might use frames with top-bars ⅞-inch wide. The use of such top-bars might help to reduce the cost of honey-poduction a little, and would do for a club to use against the trust, but for this purpose or any other purpose I would prefer a club having a little more timber. When Mr. Hutchinson wrote I do not think he meant to *advise* the use of such frames, as may be inferred from a question recently asked Dr. Miller, and which the Doctor was at much pains to answer. Mr. Hutchinson merely said that they could be used for a purpose, and indicated the purpose.

I have used top-bars only ⅞-inch wide for quite a number of years, and am now using them for kindling wood as fast as I can without destroying perfect worker-combs, and substituting frames with top-bars 1 and 1-16 inches wide in all hives where I use loose-hanging frames. The loose-hanging frame is a nuisance in hives with metal rabbets. When resting on a plain wooden rabbet it sometimes happens that considerable force is required to loosen the frames, and the pressure may cause the shoulder of a frame to give way. I use frames now 1 1-16, and ⅞-inch up and down, and have no trouble with splitting when trying to loosen them. The frames with ⅞ top-bars have too much space for brace-combs between the top-bars, I have one kind of hive in which I use loose-hanging frames altogether, and want nothing better either in hive or frame for extracted honey. I use some of them for comb honey, too. This hive has the same dimensions as the 10-frame dovetailed, except that the bodies are 12 inches deep instead of 9½.

Dr. Miller's idea that the frame with the narrow top-bar can be more easily moved from side to side to facilitate the removal of the first frame is not always true. It would be true if the bees would always build combs ⅞ inch thick and no more. I frequently find the combs extended beyond the lower edges of the top-bars. In such cases, how about moving from side to side? I want a wider and stronger top-bar than ⅞-inch, and shall not adopt it for the convenience of the foul-brood inspector.

I make hive-bodies, covers, bottom-boards and supers for my own use, but not frames, except in case of emergency, like that which occurred last summer. Then I made some top-bars 1 1-16 inches wide with saw and jack-knife. It is not hard to do, but I prefer to economize in other ways. Having made more than 200 hives, besides all of the supers that are needed both for comb and extracted honey, I may be supposed to know something of the cost of these things. I will not give figures to fall into everybody's hands, but will simply say that there are some bee-keepers, and some that want to become bee-keepers, who cannot afford to buy hives and supers at the prices charged by the manufacturers.

Somewhere in this article I used the word "trust," and may be challenged to tell what I know about a trust. I don't know anything. One thing is significant: I have under my hand a half-dozen catalogs from as many concerns, and all cut after the same pattern, so far as prices are concerned.

Returning to the subject of making hives and supers, I will say that the bee-keeper who has some leisure—some time when he will not be fully employed, and is reasonably handy with tools—can make a great saving by doing his own work. The cost of lumber will not, or at least need not, be so great as that recently given by a prominent manufacturer in his own paper. When a sum equal to the cost of a thing is added to it the thing comes high to the user. I think that is what is done with about all the things a bee-keeper uses. Probably co-operation in the purchase of these things is the best means for bringing the prices of supplies down to a point that will allow the bee-keeper to secure a profit on the sales of his honey, that is within his reach. Manager France got a rate on 60-pound shipping-cans that was much below that of supply dealers and manufacturers in general. I see the rate has been withdrawn. Why? Was it because of pressure from these dealers and manfacturers? Co-operation will bring things around to suit the buyers of cans and all other supplies if the bee-keepers will it. Surely, there is some one, or some dozen, among their number who can safely be made their purchasing agent or agents.

But I have neglected to speak to another class of bee-keepers, or rather, would-be bee-keepers. I mean the poor women and boys who would like to have a few colonies of bees but have no money. I can point you to sources of material for hives and some other things that will cost you no money, or next to none.

I have square-cornered hives that have been nailed for 10 years or more, and the corners show no signs of opening. Let me say to the one making his own hives, to use care in nailing. If your pine is very soft you can use a pretty good-sized nail. From this you can draw some inferences.

Perhaps it is the sunset of life gives me mystical lore, anyhow coming events cast their shadow before. Although I see nothing resembling the ensanguined field of Culloden, yet I see distinctly the reign (or rain) of the four-piece section. Let us have a shower of then right away. Manufacturers should make and advertise them without delay. I think that I would like to try some of them myself. I am tiring of the effort to make the one-piece section retain its squareness.

Decatur Co., Iowa.

That Honey-and-Water Problem.

BY J. E. JOHNSON.

ON page 84, "Subscriber" asks me to answer questions concerning the deliquescent properties of honey. Now I love to ask questions myself, but find it hard to give an intelligent answer, however I'll offer what aid I can, and try not to make it misleading.

It is true that some bodies are deliquescent, and some substances and liquids are effervescent, but this matter of honey absorbing or abstracting water from air, so as to increase its bulk almost one-half, looks unreasonable. Good, thick honey is so dense that if water be added without taking away other ingredients it must certainly increase in both weight and bulk. Honey granulated dry would no doubt absorb water from the atmosphere, but not increase very much, if any, in bulk, but would increase in weight. Natural air always contains water, because water always evaporates and goes into air; even a block of ice, in a temperature far below zero, evaporates to some extent.

All moisture on earth evaporates continually, and is carried in the air, and afterwards returned in the form of rain, etc. A warm atmosphere always contains more water than cool air under the same circumstances. A cellar, although cooler, usually contains a more moist atmosphere than the rooms above, owing to lack of ventilation, and open pores of earth in floor and walls. We know that if we place a box of comb honey in a damp cellar or a moist room, the comb will collect water so as to be wet; but if you place a perfectly clean, dry, empty comb in the same room it will also collect moisture. If you put a jar of honey in a damp cellar it will gradually become thinner if exposed to the air, and if left in that condition long enough there will be nothing left in the jar but water and a sediment at the bottom of the jar; but during that time it would undergo many changes.

In a real damp cellar of insufficient ventilation nearly everything will soon be covered with mold, caused by the organisms, fungi, or other closely related organisms. All mold is covered by living organisms, and moisture is very necessary to their propagation. If we place honey in such a room, then add a culture of the ferment *Sacchromyces illipsoidens* (the most common alcholic ferment), a certain action will take place converting the sugar into alcohol. When these organisms have properly done their work, it will then be a favorable medium for the organism *Mycoderma aceti* or *bacterium lineola*. If some of these organisms be then put into this, they will immediately begin to make further changes, propagating rapidly and abstracting oxygen from the air and transferring it to the alcohol, thus converting it into acetic acid. Then your honey has become vinegar; and if still left exposed to a moist air it would finally become vinegar; and if still left exposed to a moist air it would finally become water, and in time the water would evaporate, leaving only a dry sediment in the bottom of the jar. Now this latter ferment (bacterium lineola) is a true bacterium, and can work only on the surface, as it is of ærobic nature. Hence the larger the surface exposed to the air the more rapid will be the changing of the alcohol into acetic acid or vinegar.

Now as to "adding water to the honey in the beginning, to make it more favorable to decomposition," honey contains formic acid in sufficient quantity to make it an antiseptic to some extent, preventing work of decomposition, but in an atmosphere heavily laden with moisture the organisms will be greatly aided in decomposing the honey, and if some water be added it will become still more favorable.

Alcohol can be oxydized into acetic acid chemically by *platinum black* without the aid of a ferment. Now, right here let me tell of an experiment I made this winter. Now these ferments are to be found on the skins of nearly all fruits in summer, and in the air, but in the winter they are usually dormant, and probably not to be found in the air in very cold weather; so I took about 2½ pounds of honey and mixed with water so as to make a gallon. I put this in a jar and set in a warm place near the stove. After three weeks it was found to be still only sweetened water, and the water had evaporated so that there was hardly 3 quarts left. I then poured in ½ teacupful of good cider-vinegar, and in less than two weeks it was good vinegar; so it would seem that the proper organisms were not present until I poured in the vinegar containing these proper ferments. The vinegar no doubt contained both the alcoholic and acetic ferments. Probably a few apple-parings would have given similar results, as they usually contain both of these organisms.

Now, water is ⅓ oxygen, and the air is 1-5 oxygen, and the acid forming ferments draws oxygen from the air and transfers it to the alcohol, so it may seem that the bulk would be increased; but in making this change other properties are lost, so the weight would be less, and probably bulk also. In answer to the first question, as to what law in chemistry furnishes moisture for the air, I would say, Evaporation. As to how much faster honey would decompose if mixed with half its weight in water, I am sure I don't know. It would very much depend upon whether ærobes or anærobes were the agents of decomposition. Also different temperatures favor different organisms; some prefer 100 degrees, some a lower temperature, but all living micro-organisms require moisture for rapid propagation, hence adding water to the extent of a half would favor them in that respect. Also the proportion of formic acid to the whole would be less, hence more favorable.

Knox Co., Ill.

Convention Proceedings

Report of the Ontario Bee-Keepers' Convention Held in Trenton, Dec. 1, 2, and 3, 1903.

BY MORLEY PETTIT.

(Continued from page 264.)

SIZE OF HIVE—REPAIRING HIVE-COVERS.

"What size of hive would you recommend?"

C. W. Post—Nine or more frames.

"How repair covers which leak?"

Mr. Post—Cover with tin, and paint over the tin.

CLOSING HIVE-ENTRANCES FOR MOVING.

"How would you close the entrances of hives for moving?"

Mr. Post—We have for the top a frame the size of hive, and an inch or so deep, covered with wire-cloth. Slim wire nails are driven through this frame into the top of the hive. The same sort of frame is fastened on with Van Deusen hive clamps in place of the bottom-board. The screen on the bottom-frame is next the hive. These arrangements are left on all through the swarming season, and almost entirely prevent swarming.

R. F. Holtermann said he was sorry so clever a man as Mr. Post was so far behind the times in the matter of shutting in bees for moving. He then described the Holtermann portico. The sides of the hive project about 3 inches in front, and have a board cover to form a portico. During the day a screen can be slid part way down in grooves for the purpose, then in the evening, after the bees quit flying, drop the screens, confining them to the portico, not to the hive. Half the colony can hang out in this portico, if they wish, the entrance is never choked, and the bees can be safely moved in the hottest weather without other ventilation.

BEE-ESCAPES—PREVENTING INCREASE.

"Do you use bee-escapes?"

Mr. Post—Yes, for taking off comb honey; not for extracted—it gets too cold.

"How would you prevent increase in working for extracted honey?"

Mr. Post—Give lots of surplus room, screen the bottom-boards, and screens on top. Some hives have two supers, some three, and some four.

Messrs. Dickenson, Pettit, Hall, Holtermann, and others said this did not prevent swarming for them.

Mr. Pettit—Swarms would not stay hived for me on such bottom-boards. If an ordinary bottom-board were used for a few days, then wire-cloth substituted, they would swarm out.

Mr. Hall—In our country it would not succeed. It must be a difference in the locality.

HIVING SWARMS ON STARTERS, HALF OR FULL SHEETS.

"Would you hive swarms on starters, half sheets, or full sheets of foundation?"

Mr. Post—For comb honey, hive on starters; for extracted honey, hive on full sheets or drawn combs.

Mr. Pettit—From a limited number of experiments we find swarms hived on drawn combs prepare to swarm just three weeks after hiving.

A member said if hived on starters they were no good for buckwheat.

Mr. Holtermann—It does not do to have combs below and foundation above, or *vice versa*. You must use combs in both super and brood-chamber as far as they go, then foundation in both. They will, in a good honey-flow, draw out 12 frames of foundation in 48 hours.

Mr. Edmondson said he had found where combs were given in the super and only foundation below, that they would desert the brood-chamber and have sealed honey above before touching the foundation below. This with an excluder on, too.

LARGE VS. SMALL BROOD CHAMBERS.

Then, as often during the convention, the discussion got off on the matter of large vs. small brood-chambers.

Mr. Post said that if you got an 8 quart swarm from an 8-frame hive, then you would get a 12-quart swarm from a 12-frame hive.

Mr. Holtermann had used both large and small hives, and with good queens he found the former were filled with brood and bees just as well as the latter.

Mr. McEvoy would double up brood-chambers and have a 16-frame brood-chamber; with the 12-frame he found they soon settled down so that the queen occupied a smaller number, and the balance were filled with honey. He preferred two 8-frame brood-chambers.

Mr. Post said they would desert the lower.

Mr. McEvoy was willing to go to the trouble of putting the queen below every few weeks.

Messrs. Dickenson and Shaver said they could beat Mr. Holtermann producing honey, they using a 9-frame and he the 12-frame hive.

Mr. Hall preferred the 11-frame hive.

Mr. Holtermann—It does not do to compare average results between a man with 400 colonies and one with 60. But with the 12-frame hive some last summer filled four 12-frame supers full of light-colored honey—Langstroth frames.

Mr. Post—You can easily reduce the size of a large hive, but you can not enlarge a small one.

DEPTH OF FRAMES—OUT-APIARIES.

"What depth of frame would you prefer for extracting?"

Mr. Post—The regular Langstroth depth.

"Would you bring out-apiaries home for winter?"

Mr. Post—Yes.

SECOND DAY—Morning Session.

Mr. Morley Pettit read his paper as follows, on

FORCED OR SHAKEN SWARMS.

The key-note of modern business is specialization and expansion. The highest success can only be attained by concentration on a single line. To bee-keepers this means cutting out all side-lines and keeping more bees. Not only that, but they must be kept with the least expense possible of time and money. To do this one must have large ideas, establish out-apiaries and adopt methods quite different from those employed in a single yard.

The first and greatest problem in connection with out-apiaries is that of controlling the desire, more or less developed in all bees, to swarm. Where one is devoting his whole time to a single yard, it is comparatively simple to allow this impulse to take its natural course; but while swarms are issuing and being hived at home, the thought would be unpleasant, to say the least, that swarms were issuing without being hived at several yards away from home.

A great many plans for the control or prevention of swarming have been proposed and adopted with varied success; but the one particularly under discussion is known as "forced," "brushed," or "shaken" swarming. It was first brought before the public in a time and manner to attract public attention, by L. Stachelhausen, in Gleanings in Bee-Culture for Nov. 1, 1900. True, this method has been practiced and described to a limited extent for over 100 years, but not until this recent date, when the general establishment of out-apiaries had awakened to the sense of need, did the idea become popular. During the three years which have followed Mr. Stachelhausen's first article, the matter which has been printed on this one subject would fill volumes. It has been tried and rejected or adopted with variations by thousands of apiarists. Upon the whole, it has proved most generally successful.

It is the purpose of this paper to describe briefly "forced swarming" as practiced by myself with a large measure of success during the past season. By it natural swarming is almost entirely avoided, and each yard visited only once every seven to ten days.

In the first place, every effort is made to retard swarming. Extracting-supers are put on all except weak colonies during fruit-bloom, and a certain amount of evening up of brood—that is, taking from strong and giving to the weak—is done at that time. When white honey begins coming in freely the brood is again evened up, and in stronger colonies alternated with empty combs. Comb-honey supers are put on, or extracting supers enough to contain the full amount of white honey expected per colony. Entrances are enlarged to their fullest extent, about 1¼x12 inches, and ventilation is given at the top of the super, so that a current of fresh air will pass freely through the hive. Now, if hives can be partly shaded, and the brood-chambers are large enough to give full scope to the laying powers of the queen, swarming will be greatly retarded. At the next visit all hives are examined for indications of the swarming impulse. If only empty queen-cells are found, and the brood-chamber is nearly full of brood, a frame of brood is removed and replaced by foundation; and cells containing eggs are broken down. The brood removed is used for strengthening weak colonies, or forming nuclei.

If any cell contains a queen-larva it is proof that the swarming impulse is far enough advanced to take action. Hives previously prepared for swarms have been distributed about the yard before starting operations. They each contain in the order named 2 dummies, 3 starters, 1 worker-comb, 3 starters and 3 dummies—12 in all in a hive of 10-frame Langstroth capacity. One of these is brought and set down on a bottom-board, and stands behind the hive to be treated. The operator who sits at the left of the hive removes the three dummies from the right or farther side of the new hive, and shoves over the remaining contents so as to have the empty space next to the hive. He now lifts the comb nearest him from the brood-chamber, shakes it almost free of bees, and places it in the new hive next to the left wall. The next comb has a double space for shaking off bees in the old hive. It takes its place beside the first comb, and the return motion of the hands carries a dummy from the new hive to the old. Comb No. 3 is shaken, carried to the new hive, and dummy No. 2 is brought back. The 4th comb exchanges places with the first starter, and so on. When the 12th comb has been shaken in its own hive, and transferred to the new, the 6th starter put in its place, and the old hive filled out with the 3 remaining dummies, we put on the supers, close the hive, and the bees have been "swarmed."

There is now a swarm hived on starters on the old stand under conditions fairly natural, at the convenience of the bee-keeper, without fuss, excitement, or acrobatic feats. Leaving them in the old hive is merely a matter of convenience. Unless there is no honey in the supers it is not necessary to wait for the bees to fill themselves with honey before shaking, as they can do that at leisure afterwards. These swarms behave in all respects like natural swarms just hived. If they swarm out the next day, so would natural swarms under like conditions, and the same little devices must be used to make them contented. For example, in comb-honey production it may be best to hive on a full set of starters (not omitting the comb) for a few days, then contract with dummies. Shade should be given, etc., and always ample ventilation. The empty comb in the middle is useful for various things. If the supers contain sections it catches pollen which might otherwise go up; if extracting combs, it keeps the bees from all going up into the supers and deserting the queen.

In extracted-honey production it may be best to shake on a set of full sheets of foundation. I propose to test this matter fully next season.

A few minutes after shaking, swarms sometimes show signs of queenlessness. The queen has been accidentally left with the brood, or, in rare cases, has been lost. In this case, we do not bother hunting the queen because she will do no harm with the brood, and if lost she can not be found. In fact, we hunt queens except in rare cases, but once a year, viz.: at the clipping season. Give this queenless swarm a young queen, a ripe queen-cell, or a frame of open brood and eggs. If the latter is given, all but the best queen-cell must be destroyed at the next visit.

The "parent colony," as we may call the hive of brood, sits directly behind the swarm, and has enough bees to care for the brood and the best queen-cells which have been saved unshaken. It is given an extracting super at once, and removed to a new stand at the next weekly visit. To save time, these parent colonies might be given laying queens, or, on the other hand, the brood might be shaken clean of bees, and used for building up weak colonies and nuclei.

For comb-honey production I know of only one better system than the one just described. That is, to allow the bees to swarm naturally. No colonies work in sections with the same vigor as natural swarms. This system is the nearest approach to natural swarming, and is, all things considered, enough cheaper to make it more profitable.

In producing extracted honey, I think that the 12-frame Langstroth brood-chamber and super capacity of 24 frames with one large entrance and upward ventilation from June first on, will reduce swarming to a minimum, which may be almost disregarded. I hope to be able to report more fully on this subject next year.

On examining later, colonies which had been shaken on starters without any comb, I found in some cases the queen gone. She had been worried to death by the bees that could not see why she did not go up into the super with the rest of them. Morley Pettit.

Mr. Sibbald, in opening the discussion, spoke in terms of commendation of the paper just read, saying that it evidently had not been written without experience. Mr. Pettit well said that labor is the greatest factor in bee-keeping. Other expenses are comparatively small. We are not in the business just for fun, and we must learn to economize labor in every way. Swarming is the greatest difficulty we have to contend with. Mr. Sibbald mentioned the methods of retarding swarming by ventilation and equalizing brood, as being quite in accord with his views. The latter also equalizes the labor by producing more uniformity in the condition of the colonies. He was not, however, in favor of such large hives. He thought it quite possible to overdo the queen, and when she fails to fill all the cells, pollen and honey are crowded in, and the swarming impulse begins. The brood-chamber should contain only brood, the super only honey. Then we can control the color of the honey better.

Another point: He considered the dummies as quite unnecessary—"too much truck," as he expressed it. Give them lots of work above, and you don't have much below. Even for comb honey Mr. Sibbald finds little building done at the sides of the brood-chamber. Then, to prevent after-swarming he would make the second shake, and remove the parent hive from the left side of the swarm to the right. At the close of the season set the brood-chamber of the parent hive right on top of the swarm. They would unite, and the young queen would be sure to survive.

Mr. Pettit—If the first shake is done well enough, and an extracting-super put on the parent hive at once, there is no need of a second shake, unless you don't want increase.

Mr. Hall would have the second shake anyway. Another point which Mr. Pettit did not mention was to put a frame of unsealed brood in with the swarm. This elicited much discussion for and against, which might be summed up thus: If the queen-cells contain only eggs then a frame of young brood will make the swarm more contented. If the cells are far advanced the swarm would start new cells on this young brood, and swarm the next day.

(Continued next week.)

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Gloves for Women Bee-Keepers.

My Dear Miss Wilson:—I fear I have been very negligent about replying to those inquiries regarding the gloves I wore last year, but "better late than never." I purchased mine at a men's furnishing house, paying $1.00 for them. They are Eisendrath's asbestos tan. Can be had at Keith Bros., wholesale dealers in Chicago. They seem rather clumsy at first, but soon fit the hand, and when soiled I wash them and they are soft and clean as new. I seldom feel a sting through them, and a hot smoker will not hurt them a bit. I did a great deal more work than handling bees with them, and they are good for another year, as far as I can see. Mine have one fault, they are rather short at the wrist.

I hope this will appear in time for those sisters who inquired about them. Elizabeth M. Smith.

Winnebago Co., Wis.

An Iowa Sister's Report.

Dear Miss Wilson:—This is a stormy day, and the wind is blowing cold from the north, but in spite of the snow and cold I realize that in a short time the bees will again be on the summer stands, and the same old measure of care and interest will be required to secure a good crop the coming season.

I was sorry to notice in the report given of the honey-yield for last year that I was credited with producing more than I did, which may be accounted for, I imagine, by the addition of one too many ciphers to the right of the 1000 pounds of extracted, making it read 10,000 pounds. My crops, I think, will average about 9000 pounds for the past five years, all told, both comb and extracted. I do not live in a locality where very large crops can be obtained, unless we should have a season when *all* the conditions would be just right for it, which has not occurred during my experience as a bee-keeper. There has been untimely high water, wet seasons and dry seasons to contend with.

My bees are wintering well in the cellar, but of course the dead-line is ahead.

I attended the bee-keepers' convention at Madison, Wis., last month, and enjoyed it very much.

Clara West Evans.

Allamakee Co., Iowa, March 14.

How I Dress for Bee-Keeping.

It interests me very much to read the Sisters' department.

In the way of dress, I like a narrow dress-skirt, just to come to the instep of the shoe, a gingham hat and a cotton bee-veil. I have some mitts that I knit out of candle-wick, which come from the second joint of the fingers almost to the shoulders; the bees can not sting through the candle-wicking.

I enjoy bee-keeping very much, and love to read the American Bee Journal. I think the pictures are very interesting. I think that bee-keepers' associations are good things, and there is where we bee-keepers ought to be. I do not belong to any, but I hope I will get there some day.

I have invented a swarm-catching cage that I think is far ahead of the Manum swarm catcher; but the Manum can also be used.

I also invented a "drone-catching cage" last summer. I kept 80 little Plymouth Rock chickens in the bee-yard, and taught them to catch the drones. They would watch at the entrances of the hives and catch and eat the drones as they came out of the hives. Catherine Wainwright.

Poweshiek Co., Iowa.

Spring Feeding of Bees.

Dear Miss Wilson:—We have been having good weather, and the bees have been working some; they have been getting quite a bit of pollen. The 14 colonies have wintered well with one exception, which colony appears to be queenless.

We fed our bees a short time ago. This is our way: Have the water boiling, then set it on the back of the stove, or the hearth, and stir into it a cupful of granulated sugar at a time until it is of the right thickness; then put in about a pound of extracted honey for a pailful of syrup. The honey prevents the sugar from crystallizing in the feeder. Then feed while it is lukewarm or tepid, by pouring it in soup-plates, which are placed on the brood-frames, and small pieces of board thrown in. Whenever a section or division-board gets broken I save it for this purpose.

For early spring feeding I think I would prefer a feeder which hangs among the bees.

I have prepared a lot of solid wood for the smoker today, but we use oak-bark that falls off of the fence around the apiary a good deal.

Yes, that question, "How old is Ann?" is in nearly every paper I pick up. I am 14 years old. So now I think no one will have to ask again. Ann F. Kelly.

Hickory Co., Mo., March 10.

Bees Packed All Summer—Full Sheets or Starters for Swarms.

1. A bee-keeper near here keeps his bees closely packed all through the summer with woolen quilts and carpet. Is this right?

2. One of my colonies died, due, I think, to a week's rain we had not long since. In the frames there is quite a lot of honey, but with a cell here and there with mold, and some few cells holding dead bees. What is best to do with them?

3. Would it be wise to put the frames out a distance from the hives and let the bees clean out the honey?

4. Is it better to put full sheets of foundation in frames for a swarm, or just starters?

5. Is the Danzenbaker a winter hive?

Indiana Co., Pa. Mrs. E. M. S.

1. I wouldn't think it necessary. It might be a good thing in a very cool spell, but not so good in a very hot time.

2. Give them to the bees to care for. They will do it better than you can. Put a hive-body full of frames below a strong colony, thus allowing the bees to pass out and in through the frames to be cared for.

3. Not a very bad plan if you are careful about robbing, but I should prefer giving them directly to the bees.

4. Full sheets if you want all worker-comb.

5. It is intended to be used for both summer and winter, the same as the dovetailed hive.

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we have used it ourselves.

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Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

CAN'T DO JUSTICE TO THE CHICAGO-NORTHWESTERN.

Might as well confess at once that I realize that I am not doing justice to the report of the Northwestern convention. Don't see how I can. Let 'em meditate that in this 'ere world getting half justice is spring lamb and apple pie. Then let 'em be thankful for the spring lamb and apple pie I offer them.

BEGINNERS AT QUEEN-REARING.

And beginners in the art of queen-rearing may, by their tactics of sophomore wisdom, get a *discouraged* lot of young bees—and then wonder why in the world things don't get along better. We see. Feeding can't be made to give quite the feeling of riches and enterprise which plenteous income right from the fields gives. And the latter can't be had without a fair proportion of old bees. Page 150.

LONG WINTER CONFINEMENT.

So we are "stumped" to get our outdoor bees over 100 days without a flight. At my yard this season the last general flight was Nov. 16, and the first general flight in the spring was Feb. 28, or 104 days. But I can't walk up and "take the cake" just yet. Don't know yet how weak my surviving colonies may be when May 10 arrives. And, worse yet, there was a warm morning Feb. 7—83 days from start when some of the colonies flew—before the cold wave, which came in a little later in the day, shut them off. I counted 42 flying out of about 100 which were alive at that time. Presumably the first to fly will be those that need flight most, providing they are strong enough and well housed enough to be warm. Page 151.

CO OPERATIVE FACTORY FOR BEE-KEEPERS.

Yon Yonson's remedy for the visit the octopus has paid to our corner of the industrial vineyard, is a co-operative factory for sections—and make our hives ourselves. Well, Yon's ideas are seldom or never so bad as his pronunciation. Page 150.

SIZING UP OUR ADVANTAGES.

Cute in our Boss to prove to his disgusted subscriber that he was actually realizing a profit on his $5.00 sections, apart from the honey which they contained. We all of us at times need somebody to size up our advantages for us. Page 163.

REARING "QUEEN-HENS."

Doolittle cell made on the pitchfork handle to hatch a hen's egg in—and rear a queen-hen that will imitate the queen and lay 2000 eggs a day. You don't call *that* much of a scheme, do you, Mr. Jay Smith? Page 164.

THAT SANDWICH ISLAND REPORT.

So it was 2500 colonies, and not 200 colonies, of Sandwich Island bees that stored the 300,000 pounds of honey. That brings the average down quite within the limits of belief—120 pounds each, instead of 1500. Page 164.

"APIS MELLIFERA" VS. "APIS MELLIFICA."

There is a place in the marriage ceremony where it is said, "Let him now declare it or forever hold his peace." (Terrible emphasis on the forever.) Well, I don't know who it was, but there's a chap somewhere who didn't hold his peace when he should, and who therefor should have a tremendous sound spanking. We were all peacefully calling the bee "Apis mellifica." The great Linnæus himself usually called her so, it seems. Thereupon some mischievous nuisance, with too much time on his hands, nosed around and discovered that the *earliest* recorded name was "Apis melli*fera*." Couldn't have the common-sense to keep still about his discovery. *Now*, a minority of us have been persuaded to change over to the (technically) correct form, and the majority stick to the old form—and the prospect is we shall never get together again for a whole generation. Biff! Pluff!! Bang!!!—for the fellow that didn't hold his peace. Page 165.

DEALING WITH A TANGLE OF SWARMS.

Prof. Cook thinks that a tangle of three or four swarms coming out at one time will be more easily dealt with if there are no queens among them. Worth thinking of. I don't feel *sure* that it will be any improvement; but at least I can testify that a big tangle with queens makes trouble enough that there is room for improvement. As to his way —if the bees don't refuse to "stay put" anywhere while you are securing and dividing them, and if you keep their prospective queens caged just long enough, and if they don't take a notion to break ranks and dissolve into nothing after hiving—why, then it is likely he is right. Page 165.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

What Caused the Loss of Bees?

1. What was the cause of so many of my bees dying last spring, the first of April? I had about 160 colonies, all of which seemed to be in first-class condition. I moved them about 2 miles. The spring was cold, windy, and very backward. The hives were banked with dirt and straw before moving. After moving they were put on bricks for the summer. All went well apparently for awhile, but I began to find occasionally dead colonies, with 3 or 4 frames of good honey still in the hive. As I was very busy with other interests, I did not examine the other colonies. Time went on, cold and windy until about June 10, when I found quite a number of dead colonies, and almost all had dwindled down somewhat, some of them to a very few bees, a queen and some brood; some were queenless, and others had drone-laying queens and laying workers; all had plenty of honey. No swarms issued, of course, and there seemed to be no thrift whatever among them, and one by one they kept dropping off all summer. Only about 4 colonies stored any honey in supers. By fall I had only about 60 colonies, and some of them with a very poor supply of honey. I could not detect anything that resembled foul brood, nor could I discover any cause for their dwindling. In some cases I found pickled brood.

I wish you would tell me the cause of my trouble, and how to avoid it again, and how to strengthen them up this spring, for what I have left are not the strongest.

2. Will it injure the bees in any way to let them clean out the old honey in the empty hives? I have a quantity of it, mostly candied. COLORADO.

ANSWERS.—1. It is not an easy thing to make even a guess as to the cause of so much loss. From what you say disease seems to be ruled out, unless it be a few cases of pickled brood. There is a possibility of poisoning, although that would not be so likely to extend throughout the season. Without knowing the cause of the trouble it is hard to make any suggestion as to prevention in the future, beyond doing all possible to keep warm and comfortable in spring for building up, at the same time being sure not to close up enough to prevent each colony from having all the fresh air needed. Watch closely as the season opens, and report minutely if anything seems wrong, and if it is a possible thing to give any helpful advice that advice will be cheerfully given.

2. The only objection would be the possibility of disease in the honey, but from what you say there is not much danger of that.

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Method of Preventing Increase.

Can I effectually and profitably prevent increase of colonies by the following method, when running for comb honey: When the first swarm issues remove the clipped queen and allow the swarms to return; when the swarm issues again cut out all queen-cells and return the swarm to the parent colony? If not, why not?

I have practiced the plan for two years, and, so far, with entire satisfaction. Of course, there would be times when I would have 4 or 5 swarms in the air at one time, and things would get rather mixed, but I have never failed when I got the job properly done.

I might say that I have not tried the plan with early swarms, as I generally want them to make up for winter losses, etc.

Let us suppose that a swarm comes off June 15; return the swarm and remove the queen. That settles the question of swarming for about 10 days. When the swarm issues again and is returned, there is no larvæ in the hive to rear a queen, and as there is a virgin queen in the hive it will be 10 days before she begins to lay. That brings it to about July 5. If they build queen-cells after that date they are likely to be torn down by the bees, as the harvest is about over by the time they are ready to swarm. ONTARIO.

ANSWER.—Sometimes a plan that seems to work all right for two years or more will be found wanting later on; but in this case I think you need feel no anxiety as to its continued working, for the plan was thoroughly tried before you was born, and for many it is a good plan to follow to-day. The original plan was merely to return the swarm as often as it issues, without opening the hive at all, without any queen-clipping or cell-cutting. It involves a great deal of work, for the swarm was likely to issue more than once with the old queen, and also with one or more young queens, but after killing off the old queen and all but one virgin queen there was no more trouble with swarming for the season. With clipped queens and cells destroyed, as you and others have practiced it, the swarms issuing are reduced to two. While not suitable for all, the plan will work for one who is on hand at all times to watch for swarms, especially where the number of colonies is not large. With a large number there is more or less trouble with swarms uniting or entering wrong hives. You may, however, cut a number of swarms in two by this method; keep track of the swarms that issue with the old queen, and when it is time for the first virgin queen to emerge (a week or more after the prime swarm), go to the hive in the evening and listen, and when you hear the young queen piping, cut out all remaining queen-cells the next morning. You will find it works with early as well as late swarms, although there is a bare possibility of a late swarm in case of very early swarming. Instead of cells being started late in summer, and then torn down by the bees, you will probably find it a rare thing for cells to be started in a colony with a young queen reared that season in that hive.

Hives Where Bees Died—Metallic Spacers.

1. What is the best thing to do with hives in which bees have died during the winter? There is quite a lot of honey in them.

2. Can I keep the moths out by covering the top and bottom of the brood-chamber with stiff paper?

3. In last week's American Bee Journal one bee-keeper advised using 9-frames and 2 dummies with 10-frame hive. Does he mean division-boards? and will the bees fill the outside frames as well? Would you recommend it?

4. Why, oh why, can we not have some good metallic spacers for our brood-frames? How would a pin with a shoulder (like that used in the Danz. frames and section-holders) work? I have just taken some Hoffman frames out that have been in use but two seasons. It would have relieved my feelings to have said a few bad words. MASSACHUSETTS.

ANSWERS.—1. They're the nicest sort of things in which to hive your swarms.

2. No; the eggs of the moth are there already, and will hatch out as soon as the weather is warm enough. If kept in a cool cellar they will not hatch out for some time, and will not make rapid progress when they do hatch. The best place, however, for them is in the care of the bees. Put a story of such frames under a strong colony of bees, so the bees will have to traverse them in going out or in, and they will be kept in good order. A few days after giving one, a second may be placed under, and as it gets warmer a third can be put on top.

3. No, he means dummies. Properly speaking, a division-board fits so tight as to prevent the passage of a bee. A dummy is about the same thing, only made so much smaller as to allow bees to pass freely. I would rather have the two dummies than to have the frames so they can't be got out. No, bees will not work sections so well over a dummy at the outside. But I've tried to a limited extent having a dummy in the middle of the brood-nest, and it seems to work all right in hot weather.

4. One reason we can't have them is because manufactures don't feel the need of them as much as you and I do. I'd pay several prices for a few pounds of nails with heads ¼ inch deep and 3-16 across. Failing to find that, I use common nails and drive them in all but ¼ inch. If I were working for extracted honey, very likely I would object to metal spacers.

Thanks for invitation to ride in your engine. I'd like it—if you didn't go too fast.

Wintering Bees Outdoors—Temperature for Handling Brood.

1. Which is the best way to fix bees for wintering outdoors, with a tight-fitting cover on the hive or with chaff cushions, or some other porous material over a Hill's device, or empty super?

2. Is there any way to keep the moisture from the bees, and from condensing in the hives? If so, how?

3. What degree should thermometer register when it is warm enough to take brood-combs out of the hive to find queens, or to examine them for other purposes without chilling the brood? INDIANA.

ANSWERS.—1 and 2. If a plain board cover be directly over the bees the moisture will condense on it and fall on the cluster; but the moisture will not condense readily on woolen, chaff or something of that kind; so that it is preferable to the close-fitting board cover.

3. You can't go by the thermometer. A raw, chilly wind on a cloudy day is a good deal harder on the bees than a still day with a bright sun, although the thermometer may be exactly the same on the two days. The bees will tell you better than the thermometer. When it is warm enough for the bees to fly freely you can open hives.

Transferring Bees.

1. I have 1 colony of bees in a hive which measures 16x18, and 12 inches deep. I want to transfer them to a 10-frame hive. You say, on page 216, "Cut the combs out of the frames." What I want to know is, what will I do with the bees when I am cutting the combs out of the old frames and fitting it into the new ones?

2. I thought of making a brushed swarm on full sheets of foundation. "Bees and Honey" advises lifting the comb on which you find the queen from the old hive and placing in the center of the new one. I cannot do this as the frames are different sizes. Will the bees stay on the full sheets of foundation without a frame of brood? NEW YORK.

ANSWERS.—You can shake and brush all the bees off the comb, leaving them to stay in the old hive without any comb till the new habitation is fixed up for them, then set the new hive on the old stand and shake down the bees in front of it. Or you can fit out one frame, put it in the new hive, remove the old hive from its stand, setting the new one in its place, and putting the combs in the new hive as fast as you transfer them, brushing the bees from each comb (when you take it from the old hive) into the new hive.

2. Yes, they will generally stay on the foundation, and you can make it more sure by placing a queen-guard or excluder in front.

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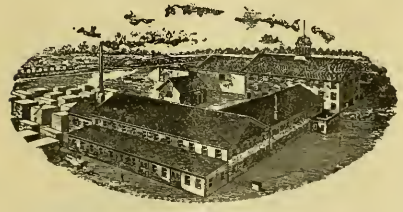

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FROM MANY FIELDS

Expects a Good Season.

The past winter was very cold, and very hard on the bees. I winter my bees on the summer stands. The coming season ought to be a hummer, for the season was wet, and the past season as a honey-year was fine, as some gathered large crops. I had 2 colonies, spring count, and got between 500 and 600 pounds.

EZRA HUMPHREY.

Faribault Co., Minn., March 21.

Wintered Well—Fine Prospects.

My bees are wintering fine so far. Every colony was alive Feb. 22. So far as I could find, all have plenty of honey and are not moldy. They have enough honey to last them until they can make a living, but from now until they are let out-of-doors will be the pinch. It will be harder on them than the previous part of the winter. At least, that has been my experience here.

The prospect for honey is very good here. There was plenty of white clover last fall, which went into the winter all right, but we have not had much snow until now, and the ground is frozen very deep (about four or five feet), but I do not think it will hurt the white clover, as the roots are right on top of the ground. There was not much honey in the basswood last year, as only about half of it blossomed out, so there is a prospect of basswood honey this year. Well, we are hoping for the best, anyway.

A great many bees around here are wintered out-of-doors, in 4-colony hives, such as N. E. France uses. I do not know how they are wintering, but I think the winter will be hard on them, for there has been but one day this winter when they had a good flight. The temperature has been as low as 30 degrees below zero, and it has been very cold all the time. But we hope that they will winter well, anyway.

U. S. BOYD.

Grant Co., Wis., Feb. 22.

Home-Made Bee-Supplies.

There has been much discussion in the bee-papers recently, regarding the high price of hives, in which I have been much interested. It is a question with which every bee-keeper should familiarize himself, whether he keeps 5 colonies or 500.

I wish to add a word to what the others are saying and give my experience in regard to the cost of hives. I have now 32 hives, all except two of which I made myself. Furthermore, I consider those I made just as good as, if not better than, those I bought.

I have just completed 12 single-walled hives of the dovetailed pattern, except that I halved the corners and nailed them both ways—a method I prefer to dovetailing, as when a dovetailed hive spreads the least bit at the corners, it makes a crack right into the brood-chamber, whereas the halved corner does not. Ten of these hives are for 8 frames, and two hold 10 frames.

These hives complete, with cover of one piece, beveled, as the different manufacturers used to make them, nailed, and with a false entrance for winter, cost me as follows:

127 feet pine lumber at 2½c per foot	$3.18
5 lbs. of 8d wire nails at 4c per lb	.20
24 tin rabbets, made at the tinner's	.25
1 gallon best outside paint	1.70
24 hours labor at 31¼c per hour	7.50
Total	$12.83

The cost of hives, bought of dealers, nailed and painted, is $16.36. These figures show that I saved $3.53, besides the freight bill that I would have had to pay had I bought the hives of a dealer. I have allowed 10 percent waste on the lumber, but the greater part of the waste I took to the mill and had sawed into ends, tops, bottom-bars, and wedges for Hoffman pattern frames, which I made at a

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reduction in price also. Bear in mind, this is the maximum price of everything, giving the manufacturers as fair a show as possible; but my hives cost me still less than the figures given above, as I buy my lumber by the thousand feet, and my nails by the keg; but I give these figures for the benefit of any one who might be in a location where building materials rule as they do here.

It seems to me as if the companies who manufacture bee-keepers' supplies are getting to be just as greedy as any of the trust combines; but if the bee-keepers would make more of their supplies, which they could do if they would, these supply keepers would have to reduce their prices.

It would be a good plan for the National Bee-Keepers' Association to build a plant and manufacture supplies for the members at a small profit, but as I do not know about the financial strength of the Association I would not say that it would be advisable at the present time; but this I do say: If all bee-keepers felt the same toward the supply manufacturers as I do, the manufacturers would not get fat right away.

WILLIAM W. JACOBS.

Middlesex Co., Mass.

Rain in Northern California.

I wrote once or twice not long since that we were having rain galore. Yes, then we thought we had enough, but it has been raining every day for some time, and the end is not in sight. This portion of California is getting a terrible soaking, 25 inches having fallen in Oakland and vicinity, and here the fall is nigh 20 inches. Floods are common all over the northern portion of the State. It will be a great year for crops. Sunday I saw big fields of yellow flowers near Oakland. Many fruit-trees are in bloom, and the bees fly merrily—when the sun has a chance to come out. The year may rival our famous 1862—"the year of the flood."

W. A. PRYAL.

San Francisco, Calif., March 22.

Satisfied with His Start.

I commenced the season of 1903 with one colony of bees, paying $5 00 for just the bees and the combs they were on, but I thought I did pretty well, anyway. I increased it to 4 colonies, and got 190 pounds of surplus honey, including some unfinished sections from which 136 pounds of honey were extracted, and the balance was comb honey. I sold about $17.00 worth of honey at 15 cents per pound, and kept the rest for my own use. I am wintering five colonies on the summer stands. I was out to see them to-day, and found them all alive and apparently in good condition. We had a long spell of cold weather here, and the bees did not have a flight from Nov. 15 until Feb. 5.

I have not heard how my neighbor bee-keepers' bees are wintering, so I can not tell yet what the losses will be.

The American Bee Journal is all right. I will not do without it as long as I keep bees, if I can help it. JOE KRAMER.

Sioux Co., Iowa, Feb. 22.

Bees Wintered All Right.

I have 35 colonies of bees; they wintered all right, and every queen is alive this spring. I am putting on supers now while "youse fellers haint thawed aout yit." The bees are working on almond bloom now; the next bloom will be apricots, then peaches, prunes and cherries, in rotation. The last two make the lightest colored honey, selling at 10 cents per section, wholesale. Apricots and almonds make a very dark, rank honey, but after standing some time it gets better.

We are troubled in this section of the United States with some cheap honey being run in for any old price that the farmer, who has only 2 or 3 colonies, can get.

Most of the "embryo apiarists" get "cold feet" after getting stung a few times, and let the bees have their own way. I guess it is the same everywhere, just a plain case of the "survival of the fittest." There is no organization of bee-men in this part of California;

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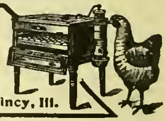

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there ought to be. The climate is very much in our favor. The bees are wintered on the summer stands, and work on pollen in January.

The climate must be fine, or a circus would not winter here. We also have an ostrich farm here. San Jose, a city of 25,000 inhabitants, is only 4 miles from here. No snow has fallen in this valley for over 20 years. Ice gets to be only ¾ of an inch thick, and not very cold at that. We call it "Paradise" here—The land of the prunes and home of the honey-bee. M. S. PHILLIPS.

Santa Clara Co., Calif., March 8.

Making Hives, Supers, Etc.

I will try to tell how I make hives and covers. I buy the best white pine for hives. I get 1x10 surfaced on both sides, supers to hold 3⅜x5¼ sections. For bottoms I use the best 8-inch flooring, with 1x2 inch cleats nailed edgewise underneath. For covers I use the same as for bottoms, and paint with two coats of paint, and then nail a strip of tin over the joint. This makes a good cover at a cost of about 7 cents each. I paint hives two coats. In this way the hives cost me, without frames, sections and separators, about 45 cents each, and I think they are good enough.

Last season was good for honey and lots of swarms. This has been a hard winter on bees on the stands. It got as cold as 26 degrees below zero. C. H. ZURPANN.

Lewis Co., Mo., March 3.

A Long Confinement.

To-day, for the first time since Nov. 19, 1903, my bees had a flight. On examination I found 2 colonies dead out of 9; the 2 died of starvation. There is no sign of dysentery in the 2 dead or the 7 still alive. The colonies were all in single-walled 8-frame dovetailed hives, with an outside box packed with leaves between it and the hive. There was one super on each hive, and a Hill's device over the frames, then a piece of burlap, and the super filled with leaves. W. D. BALL.

St. Joseph Co., Ind., Feb. 28.

Some Experience with Bees.

In the fall of 1901 I bought 3 colonies of black bees. May 10, 1902, I had a prime swarm of bees. One week afterward the wind tipped the hive off of the stand and broke down all the combs that were built. I took away all the broken combs, which filled all but one frame. One evening, as I was passing the hive, I noticed that they had lost their queen, and one week afterwards I opened the hive and found 15 queen-cells—as fine a lot of cells as I ever saw. There were 3 queens that were good, and others were not larger than workers, so I sent for a select-tested Italian queen. In due time her workers and drones made there first flight. The workers were not marked well. They varied from 1 to 3 bands, but the drones were well marked, 2 and 3 bands, and I did not see a dark drone in 1902-03. I have 2 Carniolan queens that breed all-banded drones. I had a young Carniolan queen mated with an Italian drone. The workers had two broad bands, but of the same shade of orange-yellow. The Carniolans have the bands of lemon-yellow, and I did not have any Carniolan drones flying at that time. Two young Italian queens were mated by those Italians drones, and their workers are as dark as black bees, but have one and two bands. Now, there are 3 queens mated with Italian drones from the one hive, as my other black bees had drone-cages set at each hive. Why were those workers from the two young Italian queens darker than the workers from the Carniolan queen?

The yield of honey was very poor here—too cold in the fore part of the season and my bees did not gather any after August. Smartweed and goldenrod were alive with bees in 1902. The same plants did not have a bee on them in 1903. There were two acres of buckwheat across the road from my bee-yard. There were plenty of the black bees on it. I looked many times but saw only a very few Carniolans and Italians, but I could see all 3 races gathering from a piece of alfalfa about

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100 rods east of the bee-yard. My Carniolan bees were gathering from a field of pea-beans near by—something I have never seen before—bees gathering from bean-flowers.

I have my bees in the cellar; they have not had a flight since the middle of November. This has been a severe winter and rough for bees.

I would like to tell of some of my mistakes in breeding Italian queens. First I bred a young queen late in the fall for the purpose of securing early drones (she was not mated, so she laid nothing but drone-eggs); I kept her in the breeding hive, and when I put my bees into the cellar I placed this hive upon a hive of black bees, with a piece of wire-cloth between the two hives. Along in February I took the wire-cloth out so they could go down in the lower hive, and when I placed my bees on the summer stands I never saw such a mess. She had layed in the worker-cells, and the drones were no longer than the worker-bees, and as black as charcoal. She did not take the drone-comb as I thought she would, so I destroyed the queen and drones. (This mistake caused me to make another one). I bought an Italian queen of Mr. Langstroth, paying him $20 for the queen. Her workers had one or two bands, and more of her drones were black than yellow banded. I did not consider her a good queen to breed from, so I made a drone-trap by taking a tin tube and inserting one end of it in the hive and the other end in a wire-cloth cage. In this way I captured all the drones from that colony. I kept all drones that had yellow bands on the upper part of the abdomen, and gave them to a queenless colony that I had given several queen-cells to, and which they had destroyed. I found one opened on the end, and thought I had a young queen for sure. I wished to see this queen, and would open this hive every time I passed it. After a while I found eggs in the hive, and after a long and careful search I found her backed in a cell, laying. I could just see head and wings showing. I got her out quickly; she was a worker, shining black. I found 3 such workers in the hive, so I gave them another queen-cell. This one hatched, but her wings were imperfect on one side. I let her remain until another cell was ready to give. When I opened the hive in August, to give another cell, I found she had commenced to lay. I gave this queen to an observatory-hive colony. She soon filled the comb with brood, so I thought she was another drone-laying queen. I took her out and started a nucleus with her, and the queen and bees left the frame of brood I gave them and was lost; and when her worker-bees hatched I never saw a better marked lot of workers than this queen's workers were. If I had left them until the brood was capped over I should have seen she was not a drone-laying queen. (So another mistake). I know those dark drones are not pure to breed from. I brought my first queen in 1863, and from 1885 until 1902 I quit buying queens.

SUBSCRIBER.

Genesee Co., N. Y., March 4.

[The writer of the above evidently forgot to sign his name. There are a great many careless writers and correspondents, we find. Sometimes a letter containing money is received, and no name signed to it. Then quite frequently no post-office is given. All who attempt to do any business should be careful about these things.—EDITOR.]

First Flight of Bees.

The only fair flight for 14 weeks occurred on Saturday, March 20. It was the coldest period for the length of time I ever experienced, and I am not a spring chicken by any means. The loss to date is 7 colonies out of 47. Many are weak and may dwindle out of sight. And just contrary to all ye learned apostles of beedom, queens of 2 or 3 years old have the strongest colonies to-day, and those that perished were nearly all young queens, none of which was 2 years old. The hives have closed-end frames, 10 frames in every hive (except one that has 15, and wintered well); burlap over frames with small passage way, leaves in the super, hived cribbed and

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packed with leaves outside on three sides only, and right on the ground. The combination stand and bottom-board is the best thing, in my opinion, ever devised where bees are not to be moved.

In the drouth of last year blackberries gave a good supply of honey. Our average was 35 sections per colony. Many contained pollen for the first time. A. C. Hunsberger.

Northampton Co., Pa., Feb. 22.

Wintered Very Poorly.

Bees in this county will come through the winter very poorly, and most of them will be dead. We did not have a drop of honey after August 1st, and those who extracted about this time and did not feed in the fall, will have no bees after this winter. I did very well with mine. I had 6000 pounds of extracted honey, and 100 pounds of comb honey from 60 coloniea. I have 56 colonies in the cellar. They are in fine shape and I hope for a good crop this year. We have had a great deal of snow, and the white clover may come through the winter in good shape and furnish a good honey crop this year.

Herman Luedloff.

Carver Co., Minn., March 20.

A Severe Winter.

My 5 colonies are away down out of sight. Since the middle of November we have had zero weather all the time; we have never seen it so severe, and it is still snowing.

I must thank you here for the suitable instruction I find in the American Bee Journal on the subject of my failure. Last year they built up strong, the bees would swarm and skip, and swarm and skip. I feel it is neither for want of proper instruction, nor yet able instructors, that I failed, but rather want of promptness and courage, and I must add ignorance, too. It never entered my head the bees would swarm so late in the season; it was just then that big, disastrous swarms shocked me. Thomas Henry.

Ontario, Canada, March 1.

Feels Greatly Encouraged.

I am greatly encouraged. I wintered my bees with very little loss, and they are now in fine shape, having worked on alder, maple and fruit-bloom. They have built up in stores and to strong colonies. The prospect for a good crop and increase are better now than they have been since 1888.

I am well pleased with the American Bee Journal, and can truthfully say that it has been worth more than four times the cost to me. J. J. Wilder.

Dooly Co., Ga., March 3.

Report for 1903—Wintering.

I started in last spring with 8 colonies (hybrids), increased to 20, and secured 1075 pounds of honey, which I have sold at 15 cents for first grade and 12½ cents for second grade. I use 8-frame dovetailed hives, painted white, with half of them red on the front. I have the shed open on the south, and set the hives under the front part of the roof, with a space of 6 feet wide behind the hives, which are set in pairs, 6 inches apart, space 18 inches between pairs (one hive red and one white). For wintering I tack burlap on the bottom of the super, and fill with dry leaves. I leave the shade-boards in front of the hives to keep out snow and cold winds. When a warm day comes and a few bees have found their way out, I take down the shade-boards and let them fly. The record shows they had flights on Nov. 22, Dec. 3, 7 and 21, Jan. 15, and Feb. 5, 6 and 23. I think the cold winds are more destructive to bees than cold, dry weather.

A. B. Nicholson.

Logan Co., Ill., March 7.

Bees Wintered Well.

I have five colonies of bees on the summer stands that wintered well. I examined them Jan. 14, and found them all strong. I used boards for wind-breaks. I want to increase, by natural swarming, to 100 colonies.

J. S. Bailey.

Macon Co., Ill., March 14.

Connecticut.—The Connecticut Bee-Keepers' Association hold their spring meeting in the Capitol at Hartford, April 28, 1904, beginning at 10 a.m. All bee-keepers and their friends are cordially invited to attend. A question-box will be opened, and several interesting essays presented. E. E. Smith, Cor. Sec.

Watertown, Wis.

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will sell tickets to Cleveland, Ohio, and return, account of National Baptist Anniversary, on May 16th, 17th and 18th, at rate of one fare for the round-trip, plus 25 cents. Tickets good going date of sale. By depositing same, extended return limit of June 10th may be secured. Through service to New York City, Boston, and other Eastern points. No excess fare charged on any train on the Nickel Plate Road. Meals on American Club Meal plan, ranging in price from 35 cents to $1.00; also service a la carte. Chicago depot, La Salle and Van Buren Sts., the only passenger station in Chicago on the Elevated Loop. Chicago City Ticket Offices, 111 Adams St., and Auditorium Annex. 'Phone Central 2057.

2—15A5t

HONEY AND BEESWAX

MARKET QUOTATIONS

Chicago, April 7.—The market is heavily supplied with comb and extracted honey, neither of which are meeting with any demand, especially is this true of the comb. Prices are uncertain, as those having stock are anxious to sell it; therefore it is difficult to quote prices. The best grades of white comb bring 11@12c; anything off from choice to fancy is not wanted. Extracted, white, according to quality, sells at 6@7c; amber, 5@6c. Beeswax, 30@32c.

R. A. Burnett & Co.

Cincinnati, O., April 7.—The honey market continues to be dull; if anything, the prices on comb honey are lower; concessions are made on bigger lots. I quote: fancy white comb from 12½@14c. Sales on extracted are made at the following prices: Amber, in barrels, 5¼@5¾c; in cans, ½c more; alfalfa, water-white, 6@6½c; strictly white clover, for extra fancy, 7½@8c. Beeswax, 30c.

C. H. W. Weber.

Philadelphia, March 21.—The season for selling honey has been prolonged on account of the cold weather, which has certainly been very fortunate for the bee-keeper, as there never was as much honey shipped in so late in the season to be disposed of. It has broken the price quite considerable, but there is still quite a demand, which otherwise would have fallen off. We quote: Fancy white comb, 13@14c; No. 1, 12c; amber and buckwheat, 9@10c. Extracted, white. 7@8c; amber, 6@7c. Beeswax in good demand, 31c. We are producers of honey and do not handle on commission.

Wm. A. Selser.

Cincinnati, Mar. 4.—The demand for honey is brighter than it has been in the past 60 days. We continue to offer amber extracted in barrels at 5½@6½c, according to quality. White clover extracted is a drag on the market at 6½@8½c in barrels and cans. Comb honey seems to be reviving at 13½@15c for fancy.

Beeswax, 30c. The Fred W. Muth Co.

Albany, N. Y., Mar. 25.—Honey market dull and getting late; demand falling off for comb honey now. So much comb honey is out of condition, being candied hard in the combs makes most unsalable. We quote: 8@12c; nominal now. Extracted, while, 6½@7c; amber, 6@6½c; buckwheat, 5@5½c. Beeswax, 28@30c. H. R. Wright.

Boston, March 22.—There is nothing new to note, either regarding the condition of our honey market or prices. The demand is naturally not so heavy as it was, owing to the warmer weather and the near approach of the maple sugar season. Prices remain same as before, which are as follows: White in glass-front cases at 16c; No. 1, at 15c. Supply is ample, and demand light at this time. Extracted, water-white, 8c; light amber, 7@8c; with but little call for dark Florida.

Blake, Scott & Lee.

Kansas City, April 8.—There seems to be a little better demand for honey; the market is strong at $2.25 for fancy white comb, $2.15 for No. 1, and $2 00 per case for amber. We would not be surprised to see the market make quite a little advance from now on.

Extracted, both in cans and barrels, remains very dull and it takes extremely low prices to move same. Beeswax, good demand at 30c.

C. C. Clemons & Co.

New York, March 7.—The market on comb honey is decidedly dull. There is some demand for white honey, but prices are ruling rather low. We quote fancy at 13@14c; No. 1, at 12c; amber, at 11c, and in round lots even these prices have to be shaded in order to effect sales. There is no demand at all for dark and buckwheat comb honey, and it looks as if some of it would have to be carried over. We quote nominally at 9@10c per pound.

There is a fair demand for extracted honey, at irregular prices, fancy white bringing 6½@7c; light amber, 5½@6c; other grades, 5@5½c; and Southern, common to fair, 50@55c per gallon. Beeswax firm at from 29@30c.

Hildreth & Segelken.

San Francisco, March 30.—White comb, 1-lb. frames, 11½@12c; amber, 8@10c. Extracted, white, 5¼@5¾c; light amber, 4¼@4½c; amber, 3¾@4¼c; dark amber, 3¼@3¾c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

The market is showing very little life, buyers operating slowly, either for shipment or on local account. Such transfers as are effected are at much the same prices as lately current, although the general tone is by no means firm.

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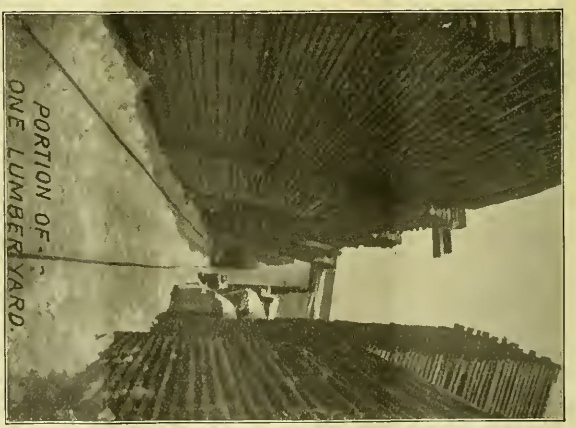

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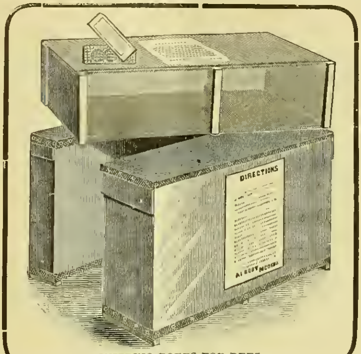
AMERICAN BEE JOURNAL

WEEKLY—$1.00 A YEAR.
Published by GEORGE W. YORK & CO., 334 Dearborn Street.

44th Year. CHICAGO, ILL., APRIL 21, 1904. No. 16.

HOME APIARY OF J. B. HALL, OF ONTARIO, CANADA.

Have You Lost Your Bees?



SHIPPING BOXES FOR BEES.

Save Your Combs.

The winter losses in some parts of the country are heavy, and the demand for bees and queens will be large. Parties needing queens should send their orders at once, and state date when shipment is desired.

Early Italian Queens.

We are fortunate in being able to offer for April and May delivery a large stock of queens from our Southern breeders. While we have a much larger supply than ever before, it is highly important that you send your order at once to secure the queens when desired, as we will fill orders in rotation. We expect to be able to furnish untested queens from our Southern yards, in any number, after April 10th. Send your orders at once.

Prices of pure Italian Queens, untested, from our Southern yard for April and May shipment.

	1	12	50	100
Untested	$ 75	$ 8.50	$35.00	$ 65.00
Select Untested	1.00	11.50	47.50	77.50
Tested	1.50	17.00	70.00	130.00
Select Tested	2.50	28.50	——	——

Prices of Our Red=clover and Honey Queens.

Untested queen	$ 1 00	Select tested queen	$ 3 00
Select untested queen	1 25	Breeding queen	5 00
Tested queen	2 00	Select breeding queens	7 50
Extra select breeding queen, one year old			10 00

We book orders, and fill in rotation.

Imported Italian Queens.

We are prepared to furnish from the best breeders in Italy, imported Italian queens. They are put into our own yards and tested before sending out. We have only two grades—best, and fair imported, and prices are given in the table below.

Best imported queens	$5 00	Fair imported queens	$3 00

The Root Queen-rearing Outfit.

In this outfit are embraced the best points of the best systems in use. It will give satisfaction to the amateur as well as the expert. The cell-cups are made of wood, wax-coated. No melted wax is used in their manipulation, as they are attached to the cell-stick by means of a small nail-point.

The nursery-cage combines the features of nursery and introducing cages. By their use a queen can be released on the candy plan or caged in the hive as desired.

In connection with the outfit goes a booklet on queen-rearing—one which ought to put the veriest amateur on the high road to success. Outfit comprises three cell-bars with 50 waxed wooden cells, one frame of cages (18), one cell-forming stick, set grafting-tools, and a book on queen-rearing..................$4.50

If sent by mail, add 50c for postage.

Tools for Queen-breeders.

Wooden cell-cup with point for attaching to bar, 50c per 100; $4.00 per 1000.

Same, waxed ready for use, 75c per 100; $6.00 per 1000.

Titoff wire nursey-cages, 15c each; $1.35 per 10; $12 50 per 100.

Frame for holding 20 cages, including cages, $3.00.

Cell-stick, 10c each; $1.00 per dozen.

Transferring needle, double-ended and nickel-plated, 15c.

Jelly-spoon, nickel-plated, 15c each.

We can supply, also, fine-pointed lace-scissors with extra large bows, for clumsy fingers, at 35c each.

Nuclei and Colonies of Bees.

We are prepared to furnish one, two, and three-frame nuclei and full colonies of bees in eight-frame Dovetailed hives or Danzenbaker hives. The nuclei are put up in light shipping-boxes made of basswood, the sides of which are only $\frac{3}{16}$ inch thick, and the ends $\frac{1}{2}$ inch. The top and bottom are covered with wire cloth. This makes a very light package, affords plenty of ventilation, and is strong enough to stand shipping 500 to 1000 miles.

Any of our nuclei, even the 1-frame, will make good strong colonies by fall if properly handled. The three-frame if properly managed can be increased four, five, or even ten full colonies by fall if bought now; and instead of having any black bees, one will have in the beginning pure Italians of the choicest stock throughout his apiary.

PRICES OF NUCLEI.

One-frame nucleus without queen	$2 00
Two-frame " " "	3 00
Three-frame " " "	3 50
Full colony in 8-fr Dovetailed hive	7 50

We can furnish with the nuclei any queen mentioned in the table of prices of queens.

One=frame Nucleus--This contains a frame partly filled with brood and bees. The condition of the hives at different seasons f the year vary so that we can not always put up nuclei in the same way; but in every case we aim to give full value. Weight about 7 lbs.

Two=frame Nucleus--This is just the same as our one-frame nucleus, except it has twice the amount of bees or brood, or of both. The box is larger, and holds two frames—one full frame of brood, or two frames partly filled. Shipping weight, about 10 lbs.

Three=frame Nucleus--This is three times the size of the one-frame nucleus, and is made up in the same way as the one and two frame. Shipping weight, about 15 lbs.

A Full Colony will contain 8 Langstroth frames in Dovetailed one-story hive—three full frames of brood, or equivalent, in six combs, and enough bees to cover fairly all the combs. No queen is furnished at the table price. Purchaser is to seclect the queen and add her price to that of the bees. Our colonies are all put up in new Dovetailed or Danzenbaker hives, painted two coats. Shipping weight about 40 lbs.

Special Offer!

Gleanings in Bee Culture one year, and one untested Italian Queen from our Southern yards.................................**$1.00**

We begin shipping at once. Orders filled in rotation. Do not ask for special arrangements; at this low price we can't make exceptions.

Gleanings in Bee Culture one year, and one untested Red-clover Queen for...**$1.50**

We begin shipping these queens about April 15. Orders filled in rotation.

Guarantee.

We agree to deliver queens in good order to any part of the United States or Canada, from April 15 to October. In case of queens valued at $5 or more, we ship in a one-frame nucleus, (no charge for nucleus). If a two-frame or three-frame nucleus is wanted, add to the price of the queen the difference in price between the one-frame and the two or three-frame. Losses must be reported on arrival.

We can make Shipments of Nuclei from

Cincinnati, Ohio, Philadelphia, Pa.,
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Wharton, Tex., High Hill, Mo.,
St. Paul, Minn., Augusta, Kans.

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GEORGE W. YORK, Editor. CHICAGO, ILL., APRIL 21, 1904. Vol. XLIV—No. 16.

Editorial Comments

Replacing Winter Losses of Bees.

No doubt many bee-keepers will find themselves with more beeless hives and combs on their hands this spring than for years. If so, the thing to do is to purchase nuclei as soon as settled weather arrives, and restock those hives and combs. In some cases it may be possible to divide strong colonies and thus utilize the hives and combs where bees died during the past severe winter.

Discouragements of Bee-Keepers.

No life or business is all a pathway of roses. Each has its trials and discouragements. Doubtless a good many bee-keepers will be inclined to feel somewhat discouraged when contemplating their winter losses of bees. But that won't do. "Faint heart never won fair lady." "Up and at it again" is the only way to success after apparent defeat. We learn by our failures; we gain strength by constant effort. If life were all ease and sunshine, where would come in the zest that arises from overcoming obstacles and compelling success through difficulties?

Guide-Posts to Success in Bee-Keeping.

Bee-papers and bee-books are but the guide-posts that show to would-be bee-keepers the way to the destination of Success. If you persist in following your own way, whether it be on the road, or in bee-keeping, there is no need of consulting real guide-posts or the best bee-literature. But if you want to be sure you are on the right road, and save retracing your steps, or perhaps avoid accidents or losses, better heed directions. As others have traveled over the way you expect to go, why not avail yourself of their experience, much of which was perhaps dearly bought? Life is too short, and competition all too strenuous, for any one in this day and age to "go it alone," or independently of what may be had so cheaply in the way of helpful advice. At best, we can not learn it all in this life. But we all want to make the most out of life. In order to do that we need to know just as many of the "short cuts" to success as possible. By reading the best bee-literature it will not be necessary to spend so long a time in creeping.

Non-Swarming Hives.

In England much dependence in the way of non-swarming is placed on what is called a non-swarming chamber, a chamber below the brood-nest, containing starters. It is said that so long as this chamber is not filled the bees will not swarm. Formerly we were told that from time to time the combs should be moved above, so as to keep the bees constantly starting fresh combs below. Now, however, we are told this is not necessary. In reply to a man who works for section honey, the British Bee Journal says:

> "The main object of a non-swarming chamber is to start the bees at work storing honey above the brood-nest, and once this is done the needful room which prevents overcrowding and consequent swarming, is given *overhead* as required; nothing being needed below but a full-width entrance. In extreme cases of strong colonies in hot weather, it may be necessary to wedge the hive from its floor-board so as to allow a free current of air all around; but plenty of room above—as a rule—suffices to prevent swarming. Therefore, when bees are at work in the non-swarming chamber, remove it, bees and all, above the brood-nest."

Little dependence could be placed upon this in this country, for when the bees are fully at work above, no matter how many sections are added, there is danger of swarming. There is a wide difference between the climate of this country and that of England. Can that account for the difference in practice?

The New York Bee-Disease.

Some weeks ago there was received at this office "A Report on the Investigation of an Infectious Bee-Disease," made by Veranus A. Moore, M. D., and G. Franklin White, B. S., of the New York State Veterinary College, under the direction of the State Agricultural Department. The results of the investigation are more or less negative, and some of them a little surprising.

The specimens of black brood examined showed in every case the presence of Bacillus alvei, leading to the conclusion "that the prevailing bee-disease in this State is very similar to, if not identical with, the 'foul brood' of other States, Canada, and Europe."

Regarding the study of healthy brood, the report says:

> "We have had an opportunity to study the healthy brood from three apiaries only. Two of these examinations gave negative results, so far as the bacteria found in the diseased brood are concerned. The other examination was of a healthy brood taken in a vicinity of bees affected with 'black brood.' It showed Bacillus alvei to be present in considerable numbers."

Nitrogen Bacteria—Illinois Bulletin 94.

This bulletin, written by Dr. C. G. Hopkins, is one of exceeding interest to farmers, and especially to bee-keeping farmers. In the summary of items contained in the bulletin, will be found the following:

> Soil nitrogen can not be used by plants until it is changed to the form of nitrate nitrogen by the nitrifying bacteria.
>
> Atmospheric nitrogen can not be used by any agricultural plants, excepting legumes, and even leguminous plants have no power to obtain nitrogen from the air unless they are provided with the proper nitrogen-gathering bacteria.
>
> As a rule, each important agricultural legume must have its own particular species of bacteria.
>
> Investigations, reported in this bulletin, furnish conclusive proof that infected sweet clover soil can be used for inoculating alfalfa fields, and with the same results as are obtained from an old alfalfa field.

This whole matter of nitrogen bacteria is of more importance than generally supposed. Of the ten essential elements of plant-food, nitrogen, phosphorus, and potassium are the three that have market values. Commercial nitrogen costs about 15 cents a pound, and i takes a pound for a bushel of corn, so it would be an expensive business to buy it, but Mr. Hopkins tells us that there are about 75,000,000 pounds of atmospheric nitrogen resting upon every acre of land, and that it is possible to obtain unlimited quantities of nitrogen from the air at very small cost, providing we have leguminous plants, such as clover, alfalfa, or peas, accompanied with the right kind of bacteria at the roots.

The item of special importance for farmers outside alfalfa regions is that which relates to the furnishing of the proper bacteria for the growth of alfalfa. The bulletin says:

> "In Winnebago County, where sweet clover is very prevalent along roadsides and in waste places, it was noted that the abundance

of root-tubercles on the alfalfa plants seemed to be closely related to the presence of sweet clover in the vicinity, strongly indicating that the bacteria which live upon sweet clover were also at home upon the alfalfa roots. These indications were strengthened by further investigations in Lake County, especially upon the Fowler farm, near Lake Villa, where a field of alfalfa seeded last spring without artificial inoculation was found to be thoroughly infected with the bacteria, and growing vigorously with a good dark-green color. This field had a few sweet clover plants growing in it, and the borders of the field were covered with sweet clover. Other fields of alfalfa seeded in the neighborhood at the same time, but upon soils where sweet clover had not grown near by, were apparently complete failures, many of the plants having died, and most of them still living being only a few inches high, very weak, and yellow or pale green in color."

According to this, we may hopefully sow alfalfa seed in any place where sweet clover flourishes near by with plenty of tubercles on its roots, and then continue the hopefulness by expecting it to yield nectar when a good stand is established.

Any one interested in Illinois agriculture may obtain the bulletin free of charge by sending a request to Prof. E. Davenport, Director Agricutural Experiment Station, Urbana, Ills.

Miscellaneous Items

Mr. J. L. Anderson, one of the oldest readers of the American Bee Journal, living in McHenry Co., Ill., called on us last week. His bees were still in the cellar, but he thought they had wintered all right.

* * *

Rev. R. B. McCain, a bee-keeper in Grundy Co., Ill., called on us recently. He reports no loss among his own bees, and so feels much encouraged, especially as he has been very successful in his work with bees so far.

* * *

Mr. Wm. J. Gilliland, of Hamilton Co., Ohio, has the honor of having his portrait in the March number of the Irish Bee Journal. Mr. G. is the very efficient secretary of the Hamilton County Bee-Keepers' Association.

* * *

Dr. I. P. Wilson, a dentist bee-keeper of much prominence at Burlington, Iowa, died very suddenly of heart-failure, March 16. He was nailing up some hives of bees, and when stooping over he fell. He was 67 years of age, and a leader in many walks in life.

* * *

Rev. John Dooly, of Berkshire Co., Mass., has a lecture on the "Marvels of the Hive and Honey-Bee," which he illustrates with the stereopticon. He delivers the lecture to various clubs and organizations within his region of country. We have no doubt that Mr. Dooly gives a very interesting and profitable lecture. We should like to hear it ourselves.

* * *

To England, Ho!—The Salvation Army has chartered the Cunard Steamship Carpathia, leaving for London on June 14. Three hundred of the principal Salvationists of the country are going, accompanied by Commander Booth-Tucker and his staff. Two or three of the best salon berths are for sale. Prices to approved parties $115 for round-trip ticket from Chicago to London via Liverpool. Apply at once. The Salvation Army Shipping Department, 120 West 14th Street, New York, N. Y.

* * *

Ohio Foul Brood Bill Passed.—April 13 we received the following telegram:

CINCINNATI, OHIO, April 12, 1904.
GEORGE W. YORK & CO.—
Hurrah! The Foul Brood Bill passed the Senate this afternoon.
FRED W. MUTH.

We are glad that the Ohio bee-keepers were finally successful in their efforts to secure a law against the spread of foul brood. It will be an encouragement to bee-keepers in other States where they have no laws of the kind.

* * *

The Third Annual Report of the Illinois State Bee-Keepers' Association is about ready to be mailed. Those who wish to be enrolled in the membership of this Association, and also in the National, and be entitled to a copy of the Report as well, can have the opportunity by at once sending the $1.00 annual fee to the Secretary, Jas. A. Stone, Route 4, Springfield, Ills. The Report will contain the proceedings of the last meetings of the State Association and the Chicago-Northwestern, a number of pages on bee-diseases and their treatment, by N. E. France, together with the constitution and by-laws of the Illinois Association, etc. It will be a valuable pamphlet to have. If not a paid-up member already, every bee-keeper in Illinois should send his dollar to Mr. Stone (address above), and become a member of the State Association as well as the National. Better do it now.

* * *

To Our Foreign Subscribers.—We would like to announce again that none of our special offers apply outside of the United States, Canada, Mexico and Cuba. To those not residing in any of the countries here mentioned, who send us any money, we always place *all* of it on subscription, which includes the extra postage. If those in foreign countries would stop a minute to think, they would easily see that none of our special offers could apply to them, on account of the extra postage. Also, merchandise by mail would have to be registered, which would be an additional expense. But so long as they get the full value of their remittances by way of subscription to the American Bee Journal, of course no wrong is done any one.

Some Expert Opinion

"In the multitude of counsellors there is safety."—BIBLE.

Distinguishing Features of a Fixed Frame.

If for some reason you were to start in anew to keep bees, and were obliged to get an entirely new outfit—

Ques. 8.—If you should choose a fixed frame, what would be its distinguishing features?

MRS. L. HARRISON (Ill.)—I don't know.

E. E. HASTY (Ohio)—Readiness to be "unfixed."

G. M. DOOLITTLE (N. Y.)—No fixed frames for me.

REV. M. MAHIN (Ind.)—I would not choose it at all.

DR. J. P. H. BROWN (Ga.)—I do not use a fixed frame.

S. T. PETTIT (Ont.)—I would not choose a fixed frame.

JAS. A. STONE (Ill.)—I would not choose a fixed frame.

P. H. ELWOOD (N. Y.)—I know of no better fixed frame than the Quinby.

GEO. W. BRODBECK (Calif.)—The Langstroth frame, Hoffman side-bars.

EUGENE SECOR (Iowa)—Something like the Hoffman will answer very well.

PROF. A. J. COOK (Calif.)—I would not, but if one was to use such a frame I would advise the Hoffman.

WM. ROHRIG (Ariz.)—As little contact as possible, yet enough to space properly the frame both top and bottom.

R. L. TAYLOR (Mich.)—A frame with solid end-bars $1\frac{3}{8}$ inches wide, and the frame of a length to fill the hive within 1-16 of an inch.

MRS. J. M. NULL (Mo.)—I have neither fixed nor floating ideas on this subject, as I have had but small practical experience with fixed frames.

C. H. DIBBERN (Ill.)—I would make them with deep, wide tops and bottoms, and as plain as possible. I would want the end-pieces to make the ends of the hive, also.

O. O. POPPLETON (Fla.)—Close-fitting top-bars, with a blind-staple near the bottom of each end-bar, to keep the bottoms of the frames from swinging too close together.

ADRIAN GETAZ (Tenn.)—Its distinguishing feature would be, to be not fixed. The supposed advantages of fixed frames, as to accurate and quick spacing, can be secured just as well with free-hanging frames, properly constructed.

G. W. DEMAREE (Ky.)—After over a quarter of a century's experience, I would not choose a fixed frame. But if it was necessary to have fixed frames for frequent moving of hives of bees, I prefer spacing with wire staples at top and bottom of frames.

C. DAVENPORT (Minn.)—Just like the Hoffman, but with square edges to the projections on the end-bars. Those V edges are a curse and a nuisance where propolis is as bad as it is here; but with square edges the Hoffman is the best all-around frame I have ever used or heard of.

L. STACHELHAUSEN (Tex.)—I have used for 23 years, and prefer it to all others, a free-hanging (all-wood) frame, but the top-bars rest in notches of the tin rabbet. In this way, these shallow frames are fixed sufficiently; they are not more propolized, and are as easily handled as free-hanging frames. In uncapping and extracting no wide side-bars, wire nails or staples are in the way of the knife or the comb-basket, and all manipulations can be done more quickly than with any of the fixed frames known to me. I believe I have tried all of them. I do not recommend this arrangement for deeper frames.

R. C. AIKIN (Colo.)—This is practically answered in No. 7. Use deep frames of the hanging style, but shallow ones of close-fitting ends and standing, no space behind end-bars. My shallow frames have top and bottom bars identical, a scant inch wide, and a plump 1/4 thick. End-bars 1 3/8 wide and 3/8 thick.

DR. C. C. MILLER (Ill.)—Fewest and smallest points of contact possible, so as to avoid trouble with propolis. Cut-off top-bars with staples for end-spacing. Top, end, and bottom bars all the same width, 1 1/8. Frames spaced apart by means of nails, with heads 1/4 inch thick, if I could get them; if not, with common wire nails.

E. S. LOVESY (Utah.)—I don't think I would want to use a fixed frame of any size or style, because I know of no advantage of a fixed frame, only possibly in moving from one locality to another, and this can be remedied by fastening strips over the tops of the movable frame, and its advantage to the bee-keeper in the general management of his bees are too numerous to mention.

J. M. HAMBAUGH (Calif.)—In this locality I have chosen the regular 17 5/8x9 1/8 Langstroth, and 10 to the hive, and the distinguishing features are: I can use the same size for both brood and surplus in running to extracting, and 10 well-filled combs are sufficiently heavy for one man to handle; besides, it comes nearest being the universal size. We should minimize details and labor.

E. WHITCOMB (Nebr.)—The distinguishing features of a fixed frame would be that I would not want a thing to do with it. I am a member of the church, and have a great desire to remain in good standing not only with the church, but with God. With fixed frames I am afraid that I might be tempted to backslide. In speaking of grace, our Savior, we fear, did not have in mind the perplexities of fixed frames.

J. A. GREEN (Colo.)—I would use, as I do now, a frame with close-fitting ends, pressed tightly together with a screw, as in the Heddon hive, but separated by a bee-space from the end of the hive. These frames are immovable while the hive is being handled or hauled, while, when loosened up, they are handled almost as easily as a free-hanging frame, and more easily, by far, than frames of the Hoffman type. Moreover, the close-fitting ends make the ends of the hive practically double-walled, giving protection against heat and cold.

Convention Proceedings

Report of the Ontario Bee-Keepers' Convention Held in Trenton, Dec. 1, 2, and 3, 1903.

BY MORLEY PETTIT.

(Continued from page 280.)

The following paper was read by Mr. John Fixter:

FEEDING BEES IN THEIR WINTER QUARTERS.

Owing to the past unfavorable season for honey-gathering in the Ottawa valley, many letters have been received from people who have only a few colonies of bees, stating that when carrying their bees into winter quarters they had discovered there did not seem to be a sufficient store of honey in the hive to carry the bees through the winter. To gain information as to the best method of overcoming this difficulty the following experiment was tried with 6 strong colonies of bees:

Four frames of sealed honey were taken from each of the 6 colonies, leaving the cluster on the 4 remaining frames. The four frames were left in the center of the hive with a division-board at each side, and some light packing was placed between the division-boards and the sides of the hive. The wooden covers were removed, and a large propolis quilt made of heavy canvas placed over the top of each hive. Over the top of the propolis quilt extra packing was placed to keep in the heat, absorb moisture, and prevent drafts or upward ventilation. The bottom-boards were left on as they came from the bee-yard, leaving the entrances wide open.

The experiment was as follows:

1. Two colonies received maple sugar of the best quality.
2. Two colonies received candied honey and sugar.
3. Two colonies received partly-filled sections of honey.

Each colony, when put on this test, weighed 31 pounds, and each was given 5 pounds of its particular food to start with. The experiment lasted from Nov. 18, 1902, to March 22, 1903.

The 2 colonies fed on maple sugar consumed 11½ pounds each; they were examined every two weeks, and water added to the sugar through holes in the tops of the cakes, keeping it soft and moist.

The 2 colonies fed on partly filled sections of honey consumed during the same time 14¾ pounds each. There was for several reasons considerable waste in this test, and if partly-filled sections could be sold even at a reduced price, it would be advisable to do so instead of feeding back.

The 2 colonies that were given candied honey consumed 10¾ pounds each. The candied honey was moistened at intervals, which made it easier for the bees to suck up. Candied honey is made as follows: Take good, thick clover honey and heat (not boil) it until it becomes very thin, then stir in fine granulated sugar. After stirring in all the sugar the honey will absorb, take it out of the utensils in which it has been mixed, and thoroughly knead it with the hands. The kneading makes it more pliable and soft, so that it absorbs, or rather takes up, more sugar. The kneading operation, with the adding of fine sugar, should be continued until the dough is so stiff as to be quite hard to work. It should then be allowed to stand for a day or two, and if at the end of that time it is so soft as to run, or to be sticky, a little more sugar should be kneaded in. It should be cut into convenient sized cakes and placed on top of the frames in such a way that the bees can get at it easily.

The colonies in all three tests came through in excellent condition. Any of the three methods may be safely followed, but I would strongly recommend examining and weighing all bees the first week in September. At that time every colony should have a good laying queen, and should weigh over 50 pounds. In seasons when there is no fall flow of honey all colonies in Langstroth hives weighing less than 50 pounds in September should be fed up to that weight at least. The best method for getting colonies up to the required weight is, when extracting to save several full well-sealed combs, then remove some of the light ones out of the hives and replace them with the heavier full frames. If no honey is available feed sugar syrup; this latter plan is rather a tedious one, and great care must be taken not to daub the hives or appliances, as robbing at this season of the year is very easily started and very hard to stop.

Sugar syrup may be made as follows: Use the best grade of granulated sugar, two parts to one of water by weight. The water should first be brought to a boil, then the pan or vessel set back on the stove so that the boiling will not continue, but the water be kept sufficiently hot to dissolve all the sugar.

The sugar should be poured in slowly and thoroughly stirred until all is dissolved. The syrup should then be fed in a lukewarm condition. JOHN FIXTER,
Experimental Farm Bee-Keeper.

Mr. Holtermann—We must understand what is meant by a damp cellar. Because a stream of water runs through it the air will probably be dryer, because the cold water condenses moisture from the warmer air, carrying it off out of the cellar. It also carries out impurities, and is actually a drying and ventilating agent.

Mr. Sibbald did not consider feeding in the cellar practical; should be adopted only as a last resort.

Mr. Darling—Any port in a storm. I would feed candy on the tops of the frames.

Mr. Holtermann thought when dealing with living things like bees, where there are so many conditions to consider, larger numbers of colonies should be used.

Mr. Morrison—If the moisture was going to kill them, three colonies are enough to lose; if not, they could try more next time.

COLOR AND FLAVOR OF HONEY.

Several members spoke highly of sainfoin, but expressed a desire that we test the quality of the honey before recommending it to farmers generally.

Mr. Timber—For example, grass peas give a very poor quality of honey, so should not be recommended.

Mr. Holtermann—Italian bees prefer light-colored honey, if given a choice.

Mr. Lott—Sainfoin gives a very fine quality of honey.

Some one expressed the opinion that color preference was only a fad; that public opinion was liable to change if an amber honey were found with good flavor.

The following resolution was passed:

Resolved, That the government be advised to plant an enlarged area of sainfoin in order to test the quality of the honey.

WIRING FRAMES—CELLAR VENTILATION.

Mr. Fixter gave the results of some experiments on this subject.

Mr. McEvoy recommended the larger embedder in preference to the star wheel.

Mr. Hall—I kicked against wiring frames. But four years ago I started and am still at it. A point in favor of the little wheel—it crimps the wire and makes it tight, anyway. You want the foundation to come right down to the bottom-bar. Have a stiff wire, much heavier than that used for wiring, put upright in the middle of the frame. This braces the bottom-bar, and keeps it from springing up in the middle. I want a good, stiff top-bar, and the rest of the frame real light.

In reference to cellar ventilation, Mr. Byer told of two cellars in which he wintered bees. The one was in a clay soil, the other in a sandy soil. He made no provision for ventilation, and in the sandy soil the bees wintered much better than in the other. He also described his method of making sugar syrup for fall feeding. With reference to the second crop of sainfoin it might be like the second crop of alsike—too weak to yield nectar of any account.

REVISION OF BY-LAWS.

The committee appointed to revise the By-Laws then read their report. In short, it provided for a considerable reduction in the size of the board of management. It was to consist of a president, vice-president, secretary, treasurer, and five directors to be elected at large. Besides ordinary duties the president was to direct the inspector for the suppression of foul brood, also to file all letters pertaining to this, and to keep copies of them and hand to his successor in office. Sections 19 and 20, allowing delegates from affiliated societies to exercise all the rights and privileges of members of the Association were to be struck out.

Mr. Lott, who introduced the report, pointed out that the Association was not making the progress it should. The membership does not increase; we spend a great deal of money paying the expenses of a large body of directors with very little return for the investment. Nothing is being done towards securing better markets for our honey. He had no personal feelings in the matter, but wanted the best men in the Association as directors, no matter what part of the country they came from.

After a prolonged discussion the report was given the 12 months hoist by a small majority.

MOISTURE IN HONEY.

Prof. F. T. Shutt, chemist of the Experimental Farm at Ottawa, gave a short address on experiments to determine the moisture in honey. His work this year has been a continuation of last year's work. They had learned by careful experiment what experienced bee-men knew in a general way, that honey was extremely hygroscopic, and should be stored in a dry atmosphere. The experiments of 1902 showed that honey as extracted from capped combs contained 15.88 percent of moisture. After exposure to a dry atmosphere in a glass cylinder for one month, the moisture percent was reduced to 14.24. That is, with a small surface exposed it lost 1.64 percent of moisture, becoming that much lighter and thicker. Exposed in the same way to a moist atmosphere for one month, it was found to contain 31.46 percent of water, or nearly twice as much water. On exposure in a flat dish for three weeks to a dry air it was found to contain 13.84 percent, or about 2 percent less water; but when exposed in the same way to moist air, the percentage of water became 48.23. That is, it became nearly half water by just three weeks' exposure in a damp atmosphere. We learn from this that when honey is left open in dry air it will thicken, or "ripen," a very little; but exposed in damp air it thins a *very great deal.*

This year the Professor has conducted experiments comparing the ability of comb honey and extracted honey to absorb or give off moisture. The results show that comb honey is affected by changes of humidity like extracted honey, but in a lesser degree.

MAKING HONEY-VINEGAR.

Prof. Shutt also reported some experiments in making honey-vinegar, but he had not been able to control the conditions sufficiently to obtain satisfactory results. Six jars were filled with different solutions of honey and water. No. 1 contained 1 lb. per gallon; No. 2, 2 lbs.; No. 3, 3 lbs.; No. 4, 4 lbs.; No. 5, 5 lbs.; No. 6, 6 lbs.

Each was started with mother-vinegar plant. At the end of a certain time the acidity of the contents of each jar was tested. In the first jar was found .6 acetic acid; in the 2d, .979; 3d, .7; 4th, .58; 5th, .6; 6th, .295.

The result was unsatisfactory, as the temperature could not be kept above 60 to 70 degrees, Fahr., when it should have been 80 degrees. It is proposed to work on this during the hot weather next summer. When over 3 pounds of honey per gallon is used the solution is too sweet. The main point is exposure to the air to allow the plant to grow. Allow the solution to trickle from one barrel to another over shavings.

HONEY-DEW.

Prof. Shutt explained that this substance may originate in plant-lice, or by exudation from the leaves. There are conditions when the air is humid and the tree can not transpire, then this sugary matter exudes from the leaves. The samples that had been submitted were too small, but he had ascertained that the water percent of this honey-dew was 20.24 instead of 15.88, as in the case of honey. Twenty percent is dangerously near the fermentation.

ADULTERATED HONEY.

The Inland Revenue department of Ottawa, said Prof. Shutt, made a collection recently of samples of honey from various parts of the Province. Of these only 13 percent were found adulterated, and 5 percent doubtful. The other 82 percent were undoubtedly pure. They reported some samples of adulterated foundation.

(Concluded next week.)

Contributed Articles

Bees Packing Pollen in the Cells.

BY ADRIAN GETAZ.

In the book, "A B C of Bee-Culture," the statement is made that the bees use their heads as a "battering ram" to pack the pollen stored in the cells. A correspondent asked, some time ago, how the bees could use their heads as "battering rams" to pack the pollen in the cells, when such delicate and tender organs as the eyes and antennæ constitute the forepart of the bee's head.

That correspondent is widely mistaken in speaking of the eyes and antennæ of the bees as "delicate and tender organs." Bees and other insects are not built on that plan.

In the human body, and all the higher animals, we find a bony skeleton. Around this are attached different organs, and the whole is covered by the skin. But the insects are constructed in an entirely different way. The bones, so to speak, outside. The body consists of a series of boxes made of very hard and resistant substance of a horny nature, called "chitine." The interior organs of the insect are inside those boxes, and communicate with the outside world through suitable openings.

ANTENNÆ.

The antennæ are built on the same principles. They consist of a succession of chitinous rings, articulated together. Figures 1 and 2 are taken from Cheshire (Vol. 1, page 104). I have represented (Fig. 1) only the outer covering, and left out the interior organs. No. 2 shows how the different pieces are articulated together.

Inside this outer covering are found the organs of hearing and smelling, receiving the impressions from outside through very minute holes. The antennæ are also provided with hairs which are the organs of touch (Fig. 3). Each hair passes through an elastic ring fixed in an opening in the chitinous outside. When anything touches the hair and passes it, the ring permits the hair to yield and transmit the pressure to the interior nerve.

EYES.

The eyes are also constructed on the same principle. We speak of them as a collection of single eyes, each corresponding to one of the facets. That is true concerning the internal parts. But the facets themselves form practically a single plate, very resistant, and comparatively thick, of perfectly transparent chitine. Fig. 4 is from a series of articles by Cowan, published in the Revue Internationale, in 1899. The interior details are in part omitted.

THE ABDOMEN.

By this time the reader has undoubtedly thought that if the body of a bee is an aggregation of hard and stiff boxes, how can the abdomen be so flexible?

The abdomen is formed, not by a solid box, but by a series of strong, elastic rings of chitine joined together by bands of skin. Fig. 5 represents a longitudinal cut of the abdomen, the heavy lines representing the rings and the light lines the skin. The rings as represented are in a contracted position, telescoping under each other. When the abdomen expands, they draw out and permit the abdomen to lengthen considerably. Crosswise the change is effected in a still more remarkable manner. Each ring is formed of two pieces (usually called plates) joined together by the skin spoken of. Or, rather, the whole abdomen is formed of two sets of rings (plates). The expansion and contraction are produced as shown in the two Figs., 6 and 7.

fig. 1.

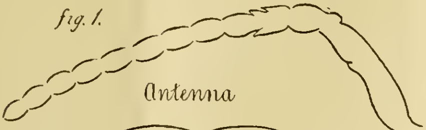
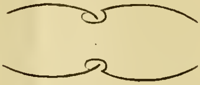


fig. 2



Articulation

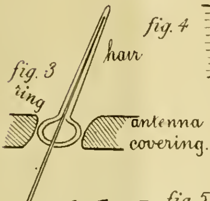


fig. 4

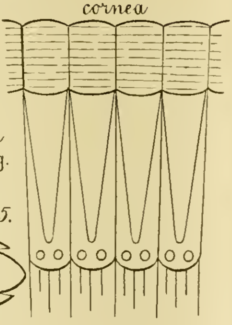


fig. 5.

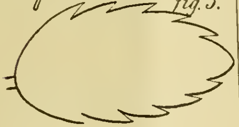
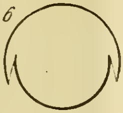
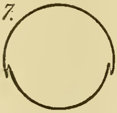


fig. 6



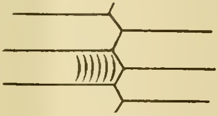
Contracted

fig. 7.



Expanded

fig 8.



The above description of the abdomen and the figures are taken from a series of lectures given last year by Prof. Bouvier, at Paris (France), and reported in the Apiculteur.

STRENGTH OF THE HEAD.

There is no doubt that the head of a bee is hard enough to be used as a packing or tamping instrument. And it could not be otherwise. The head is the most exposed part of a bee. It has to open a passage among the other bees when moving in the hive. In flying, it is exposed to, and often strikes against, weeds, plants, trees, etc. Who has not, time and again, felt bees strike against his hands or face, and strike hard, especially when a strong wind is blowing? And the head must necessarily have struck first. How often you see bees alight in front of the hive, head foremost, turn a somersault or two, get up and walk in.

PACKING POLLEN.

Exactly how the packing of the pollen in the cells is done, no one can tell. That the pollen is packed, tamped and rammed hard, every one knows. Each pellet is spread in a slightly concave form, as shown in Fig. 8, only they are close and tight together instead of being separate.

It is probable that the grains of pollen are spread by the mandibles, and tamped or pressed by the head. It would be impossible to pack the pollen as tight as it is without some tamping or pressing. No matter how carefully you might spread some pollen, it will be impossible to pack it as hard as the pollen is in the cells without a considerable pressure. No matter how carefully you would put the macadam on a road, it will never make a hard roadbed without considerable tamping or rolling. Knox Co., Tenn.

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Managing Out-Apiaries—Swarm Indicator.

BY FRANK COVERDALE.

I HAVE been reading some of the leading bee-periodicals and have thought much, and have set forth imaginary plans for myself, but without apparent advancement over the past season's management, which was to clip all queens, and during the summer season visit a yard every other day. This has been quite satisfactory, except for the loss of a few swarms, where the old queens were lost and the new ones came out. Half of these were lost on account of no one being there. Thus I look hopefully for a better plan.

We made quite a number of artificial swarms, or perhaps I should say "shook" swarms, which proved partially satisfactory, shaking only such as were preparing to swarm. The hives were tipped up on their back ends and the combs looked over. One can thus find out very quickly whether the swarming fever has set in.

While looking over the colonies, I noticed that nearly all of the old queen-cell stubs, where bees were making preparation to swarm, were occupied either by an egg or a larva. In short, practically all were so toward the center of the brood-nest. When artificial cells are placed near the center any queen at once lays in them. I am inclined to believe that a stick, laid on top of the frames—I mean between the top-bars over the center—at the beginning of swarming time, will make a very good indicator, if not an accurate thermometer, as to when the swarming fever sets in. An opening could be made in the end of the hive where it could be thrust in between the frames. In this way the combs could be spread a little to give slightly more room. The stick need be only about 4 inches long. It can be made secure and the hole closed with a suitable wooden button. About four queen-cell cups can be stuck securely to the under side of this stick near the inner end. This will, I believe, make a sufficient indicator so that one can pass through the yard in about 25 minutes and ascertain just what colonies will swarm soon, then go right after and shake those that the indicator shows up right, or where the queen has laid in any of the cells.

I have always noticed that queen-cells are to be found more numerous where most space is found between the combs in the brood-nest. Making a little space between the central combs, thus, certainly makes an ideal place for the bees to cherish and keep the cups, and the queen will lay in them just as soon as the bees want to swarm. A visit to each yard every six days would be sufficient for the operator. Jackson Co., Iowa.

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we have used it ourselves.

PRICES, prepaid—Sample copy free; 10 for 20 cts.; 25 for 40 cts.; 50 for 70 cts.; 100 for $1.25; 250 for $2.25; 500 for $4.00; 1000 for $7.50. Your business card printed free at the bottom of the front page, on all orders for 100 or more copies. Send all orders to the Bee Journal office.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Experiences in Selling Honey.

Dear Friends:—We bee-keepers have, I believe, been too nice with our honey in the past, is one reason people suspect us of manufacturing our honey. When our fathers used to "take honey" it was not so perfect, some bee-bread and some brood in it, often, and the box generally smeared all over with bee-glue. Now we have none of those things about our honey; it is perfect, in perfectly white, clean sections, and people suspect us, and accuse us of *making* it.

The past year we took 6000 pounds, all comb honey excepting about 600 pounds, and we were so driven with work we just let people come to our home for it and take it as it came from the hives, at whatever prices we could get for it; in 50 and 100 pound lots we got 10 cents per section. We just had time to scrape the tops of the sections, as they were in the cases, and we found it pleased the people to find bee-glue on them. They were assured the bees gathered the honey—not one word of fault—and the farmer neighbors from far and near came for honey the second and third time, and took full cases of 36 sections each.

The grocer soon fell into line and 'phoned us, "Bring me in one, two, or three cases." Some paid cash down, while others preferred to wait until the honey was all sold, or if there was a section in the outside that was not filled out, we took it back from the grocer. We never sold honey with so much pleasure. There were no bottoms to the cases, and yet I don't think one grocer found fault with leaking honey; they kept a paper under each case or super. When we took them fresh honey we brought home the supers.

We 'phoned to adjoining towns and sold several men 500 pounds or more. Some we delivered, and others came for it themselves in spring wagons and took it with them—those same cases just as they were taken from the hive. Scarcely any dripping honey, as it was not handled over to be scraped; but when we sold to the grocers in adjoining towns I was careful to see that the outside sections were filled out. One grocer bought 500 pounds, and telephoned for us to save him 500 pounds more.

We turned the cases bottom upward when we took them off of the hive, on their own honey-boards, and as there is a bee-space between the honey-board and sections, the sections dropped down on the honey-board, thereby loosening them, so they were more easily taken out of the supers. We use a super holding 36 sections, 4 rows, with boards between each row, and 9 sections in each row. We leave them bottom upwards until the honey is sold.

DISAPPOINTED GROCERS.

When our honey was all sold out several grocers said, "Why, if we had known you were going to sell out so soon we would have bought a big lot. Thought you had lots left yet."

Farmers came for it and bought it by the case. Sections sold by the count, and not by the pound, although at the last we had a hundred pounds or more of light sections, which we sold by the pound. One woman bought a super full, and after awhile spoke for 50 pounds, but did not come for it until we were all sold out, when she 'phoned that she wanted it. I supposed she had given up wanting it, but she would not give it up, so we had to withhold some from a man to whom we had sold later.

Our honey was not built with separators. Years ago we used separators, but we thought the bees swarmed worse when we used them, and about that time we changed our supers to a super in which we can not well use separators, but we are careful to have on starters, have the hives level, so the comb in the section does not lean to one side, and also are careful to put the starters in the center of the sections.

When selling honey, if two or more sections were built together, such supers were sold to private families.

BULK OR CHUNK HONEY.

One grocer from a neighboring town brought over six or eight 2 and 4 gallon jars, and asked for "cut out honey," offering us the same price as that in the supers. He helped me cut it out, not being very careful that all was sealed; if it was half sealed he took it. When he had filled his jars he asked me if I had any jars to sell him, as he would take more, and said he had a call for that kind of honey. I told him not to put in any excepting what would sell all right. I let him have one more jar, and he filled it, besides buying a lard-can of candied extracted honey, paying 9 cents a pound, and he also bought three or four hundred pounds in supers.

CHOICE HONEY.

I do not think we ever had nicer honey than ours was last year—very white and rich white clover, and all the fall honey was very light, no dark honey. The white clover was very abundant, but we could seldom see a bee at work upon it. It must have been because there was so much white clover and so few colonies of bees. I saw a great many more bees on catnip than on white clover.

One lady, after buying a 36-pound case three times, came after all the full supers were sold and bought about 50 pounds of chunk or "cut out" honey.

LARGE HIVES.

Our hives are large because we pack in chaff and winter the bees out-of-doors, but it makes too large a brood-nest, so we keep the bees in one end of the hive in summer, and put supers only on top, as we think we get nicer honey, and that it is more easily handled; but we had 3 or 4 colonies we could not very well keep confined to the supers; they would, when they had two or three supers on, get out into the empty space in the hive and build comb, so with one colony I took a super and turned it upon end and set it down beside the brood-nest with three supers on top, so the next time I had three supers to take off all at once—about 100 sections—the super on end being filled out nicely. When the weather was hot we unclasped and opened the front board of nearly all of the hives, as our hives are not nailed at the corners, but clasped or clamped, and those colonies that would build outside of the supers would build right ahead in plain sight, if I was not careful to cut out the combs every few days.

HANDLING SUPERS.

We did not take out sections as fast as they were filled, as some direct to be done, but removed a whole super at one time. It is too much work to take out filled sections, and then I think it is more apt to cause bulged sections. If the sections are let alone, as the bees build them, when we use no separators they will build more evenly.

We have abandoned wintering in the cellar because of so much heavy lifting for Mr. Axtell. If properly put up early in the fall, with plenty of honey, they winter as well for us as if they are put in the cellar, and with less trouble.

Warren Co., Ill., Feb. 4. Mrs. L. C. Axtell.

Your experience the past season might almost lead one to believe that the effort to produce honey in the very nicest shape is misdirected. It must be remembered, however, that the honey was as nice as you ever had—"very white and rich white clover"—that of itself would make those who purchased a small quantity to desire a "second help."

It is very likely that your customers were willing to give as much to you for sections without any cleaning as for honey put up in nicer shape by others; perhaps they would give more for it. But that was not necessarily because of the presence of bee-glue, but because of confidence in you. With many there is quite a bit of pleasure in buying at first hands, with the comfortable assurance that they are getting the genuine article.

It is true that the exceeding beauty and regularity of honey put up in the nicest shape has aroused suspicion in the public mind as to its genuineness, but is not that suspicion wearing away? and would it be wise to begin to educate the public in the other direction, so as to accept unsightliness as evidence of purity? Indeed, there is very strong evidence that a great portion of the honey-consuming public at the present day are sufficiently educated to prefer honey put up in the nicest manner possible. If any of the sisters has any doubt on this point, let her send to any of the city markets a consignment of honey just as taken from the hive, and another put up in the highest style of the art, and when she receives one or two cents a pound more for the latter than for the former, she will conclude that there is pay for the extra labor of preparation.

See Langstroth Book Offer on another page of this copy of the American Bee Journal.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

HOLDING HONEY OVER A SEASON OR TWO.

"I have never seen honey in the comb a year old or more that could be sold at as good a price as new honey." C. P. Dadant, page 166. I guess that's sound. But when it comes to the other side of the thing I guess I must protest a little against encouraging beginners to think they can keep their extracted and sell it the second or third year. Let them remain a little in uncertainty until they have actually done it. As to Mr. D.'s four-year-old barrels of honey, let there be no incredulity about them. They're all right. But I don't know as I ever had 50 pounds in one lot that was as good the second fall as it was the first. Often not anywhere near as good; and sometimes totally spoiled. 'Spects that there are a lot of the boys who can't for the life of them keep out of the same boat. And I decidedly don't believe that one-half the extracted honey on the general market would be safe to hold over a warm season.

TAKING OFF UNFINISHED SECTIONS OF HONEY.

A criticism on a very common piece of advice is made by D. McCarthy, page 173. It is often advised to take off the supers of sections while some are unfinished. A super is to be filled with these unfinished ones, and then it is to be put onto the next hive that comes handy to be finished. His experience is that they are not finished off so as to look well. This is surely quite important. Now, I seldom take off honey till it is done (except at the end of the season), and so my experience here is crippled. But I can tell you what I think: If the sections are less than half done, and no capping upon them, they will come out all right—that is, they will if put on some hive immediately. But sections half capped over, and the bottom and corners two-thirds built out, if you once take them away from the little gangs of bees that built them originally no other equally efficient gangs will ever take up the job. Nothing but a poor looking finish can be expected.

VARIETIES OF THE LINDEN OR BASSWOOD.

I don't believe John P. Coburn will find any American woodman that can tell him about the lumber qualities of the European linden. Not found in our woods, I think, except as rare samples escaped from cultivation. But we have several kinds of our own—three at least, perhaps more—that a wise head might tell about. Page 173.

SECESSION AMONG WESTERN BEE-KEEPERS.

And is it secessionists the Western bee-folks are going to be, and cut loose from the Association? Better let out the job—and forget whom they let it to. Page 181.

PROTESTING AGAINST SCANT-WEIGHT SECTIONS.

Good for you, Allen Latham, for your call and protest against scant weights! Unfortunately, no one is entitled to say, "So say we all of us;" but I can say, "So says another one of us." Page 182.

LAW FOR PRIORITY-OF-LOCATION PROTECTION.

Shall we have Dr. Miller's law written out and put in a glass case to look at—until we have a fighting chance to get it passed by some State or other? (Law against the one-out-of-twenty scamp who bounces into his neighbor's fully occupied field.) On the whole, it's possible that such a model text would not do harm—might do some good. Cold glazed missionary for righteousness. But possibly a lot of the brethren would "argie and argie and argie" about the bearing of its terms until all would be mad as wet hens—but then wet hens get dry again without any mortality list. But here's one important item the Doctor did not weigh sufficiently: Public sentiment enforces rules according to what they *ought to be*; and if the form of words we have laid down fails to match the equities of any particular case little or no harm is done. Courts, on the other hand, enforce laws *as they read*, not as they ought to read. Even when a form of words is capable of two meanings we can't always depend upon a court to take the common-sense meaning—some absurdly far-fetched precedent may weigh more in court. Must be sure our law is right before we ask to have it passed. Page 182.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

T Super vs. the Section-Holder Super.

If you were to begin anew in bee-keeping would you select the T super for comb honey?. Or, in other words, do you prefer T tins to pattern-slats? South Dakota.

Answer.—Yes, I think I would prefer the T super to anything else I have seen.

Wintering Bees in a House-Cellar.

I have a cellar under the house divided by a brick wall, with a door in it. Where the furnace is it is 21x27 feet, and a vegetable cellar 15x26 feet. In the furnace room it has been about 45 degrees all winter. April 2 it was 50 degrees. It has not varied over 5 degrees either way. Is this a good place to winter bees?

Massachusetts.

Answer.—So far as temperature is concerned, you have an ideal bee-cellar. If along with that you have darkness and sufficient change of air, you ought to be happy.

T Tin Supports—Oxide of Zinc in White Lead.

1. What are used for T tin supports? What I mean is this: What holds the T tins in the supers, and what is used in the end of the super to hold the sections?

2. What effect has oxide of zinc used in white lead in making cloth-covered hive-covers? Illinois.

Answers.—1. A strip of tin is nailed on the bottom at each end to support the sections there. To support the T tins I have squares of sheet-iron 1¼x1 inch. Three of these are nailed on the bottom at each side projecting inward, making a supporting surface of 1 inch by ⅜. Some of the latest made have what is perhaps a little better, staples of light wire an inch wide, driven in the lower edge and then bent over.

2. I don't know. I have an impression that it works all right, and will be glad to be corrected by any of the brethren if wrong.

Home-Reared Queens—Controlling Swarming.

1. I want to rear a few queens for my own use. Can I do this by placing a queen-excluding division-board in the center of a 10-frame hive, put the queen on one side, let the bees rear cells on the other, then, when ripe, cut the cells out and change the queen over, and let the bees construct queen-cells on the other side, and so on, as long as I want queen-cells?

2. By the above process could I not control swarming by keeping the queen-cells cut out about every 10 days and changing the queen over on capped-brood?

3. How did driving on capped-brood work with you last year, in the control of swarming and securing honey?

4. What do you think of Mr. Aikin's plan with double-brood-chamber hives for the controlling of swarming? Missouri.

Answers.—1. You will not find it very reliable; sometimes cells will be started and sometimes not.

2. I don't know; I'm afraid it wouldn't always work.

3. So far as I could see, giving sealed brood to a driven swarm worked just as well as giving foundation, and of course made a stronger colony.

4. I have no personal acquaintance with the method, but much faith in the man.

Thinks His Bees Have Foul Brood.

I am disheartened and discouraged this morning. After taking my colonies of bees out of the cellar, I found only one dead, and 8 rather weak. On examining closely, I find No. 1 died of foul brood, and 3 more have 3 combs, each ⅔ full of dead larvæ, sunken caps with pin-holes, color and all symptoms given by writers as indicating foul brood. Has Iowa a foul inspector? or where can I send some of the brood to see if it is foul brood or not?

Which would be cheapest, to use brimstome on 8, doctor them, or let them go, after cutting out the worst brood, and then run for extracted honey this season? After that, to use brimstone and make a bonfire of the entire lot, bees and hives? I am in for the best plan, whatever that is, even if I do need some bread and butter.

Last summer only one colony was affected, and thinking it was chilled brood, I waited all year to see, and I find the 8, including the first one, all in the same condition.

I gave the credit of this whole thing to a certain queen-dealer, as I sent to him a year ago for a queen, and the colony I gave this queen to was the first one to show any indication of foul brood, and the only one last year. It looks as if there should be a remedy against infected queens being sent out by queen-breeders, or else they should be exposed as a warning to others, as I see my fate too late. Before that I was ignorant of the disease being carried by a queen and a few bees through the mail.

I ordered supplies for the coming season, amounting to $63.00, before I had taken the bees out of their winter quarters, and of course I cannot afford to lose any more by putting diseased bees in good, new hives, so the case is laid before you for advice.

Please don't think it is just a scare, and is only chilled brood; if that were the case I think there would be young bees ready to hatch, to the size of the larvæ. All of this, or nearly so, is capped over, and brown and ropy, excepting where it dried to the bottom of the cells. Some hives had only 4 or 5 that could be detected. IOWA.

ANSWER.—The quickest way, probably, for you to decide positively whether your bees have foul brood, is to send a sample to the General Manager of the National Bee-Keepers' Association, N. E. France, Platteville, Wis. If you are not a member of that Association, it would be a wise thing for you to send along one dollar to enable you to become a member. I think it likely that he would consider it advisable, seeing you have so many cases (supposing of course that it is foul brood), to use the McEvoy treatment, throwing the diseased colonies on foundation when the harvest opens.

Rendering Combs into Wax—Ant-Proof Honey-House.

1. Some time ago I got your book, "Forty Years Among the Bees." In it I read about making beeswax by the stove-pan method, page 307. Result of $1\frac{1}{4}$ pounds of old comb: One *drop* of wax; new stove-pan spoiled, several armfuls of wood used, and a lot of one morning's time lost. Same amount of old comb rendered by boiling water and squeezing out gave $\frac{1}{4}$ pound of wax. Your method is no good. When you revise your book, revise *out* entirely that way of wax-making.

2. How can I make my honey-house so the ants cannot get into it? I mean how to make the posts and pillars that it rests on so the ants will not climb them.

Answer in the American Bee Journal. *Don't* answer this by mail.
MISSOURI.

ANSWERS.—1. I wonder if you noted the last two sentences on the page you mention, page 307. It is there said that with either solar or dripping-pan extractor, when old combs are melted a good deal of wax remains in the refuse, because the cocoons act much like sponges, and that this is especially so if more than a single thickness of comb is placed for melting. If you had laid a single comb in your pan, you probably would have gotten several times as much from that one comb as from a number of combs mashed together. The truth is that no plan works well with old comb unless you can have pressure, and a great deal of it; and the dripping-pan is not recommended for old combs. Your plan, while better than no pressure, you would probably find very wasteful if you should put the slumgum through the German wax-extractor. The dripping-pan is of value in any case where a solar extractor would be of value. A good many pounds of nice wax were extracted in my dripping-pan not many weeks ago, notwithstanding the fact that I had a German wax-press, but I did not put old combs in the dripping-pan. So you see that although it may be "no good" to you, it would be of value to others when rightly used.

2. In the cities they prevent certain insects from climbing trees by having fastened around the tree a band or double band of tin made so as to hold oil. Ants would not pass that. Success is also achieved, I believe, by means of cotton surrounding the posts and constantly kept saturated with some offensive substance, as coal-oil, carbolic acid, etc. Possibly some one will suggest something better.

Your "*Don't* answer this by mail" is refreshing when so many ask me to answer by mail—a thing I can't possibly do. You're a man after my own heart.

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That's how they live and thrive. You can't have healthy, profitable fowls or stock and have lice too. Let
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FROM MANY FIELDS

Bees in Good Condition.

The weather continues cold, and the outlook is that the bees cannot be taken from the cellar for a week or two. They are, however, in apparent good condition, and, consequently in no hurry to get out. A. C. F. BARTZ.
Chippewa Co., Wis., March 26.

Looking for a Good Season.

Last spring we started in with 16 colonies of bees, including 4 weak ones. When we straightened them up for winter we had 44 colonies, all in good condition, with hives full of honey. We use the outdoor method of wintering. Our bees were packed in leaves. Last year was not a good one in this locality. All the bees seemed to think of was swarming. As soon as a flow of honey would come, it would rain and wash it all away. We sold only 200 pounds of honey. We have had only one day, until yesterday, on which the bees could fly since winter closed up. Out of 44 colonies we have lost only 10, which we think is very good, considering the winter we have had. Of those that died, only 2 died of starvation; the rest had plenty of stores. We found about 6 full frames of honey, besides many frames about $\frac{1}{2}$ and $\frac{3}{4}$ full. These bees died simply because the intense cold made it impossible for them to break the cluster and get at the stores. We also found some signs of dysentery among those that died. We are looking for a good honey season this year. CHARLES M. HARRIS.
Schoharie Co., N. Y., March 25.

Bees on the Wing All Winter.

I have 52 colonies of bees. There has not been a day the past winter but what they were on the wing. They have stored lots of honey, and at this writing most of them have their supers nearly filled, but I will have to leave them as they are until next fall. All I can do is to put on more supers. There is no one here, with whom I care to trust them. There are a few men here who think they know it

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CHARLES SCHILD, Ionia, Mich.
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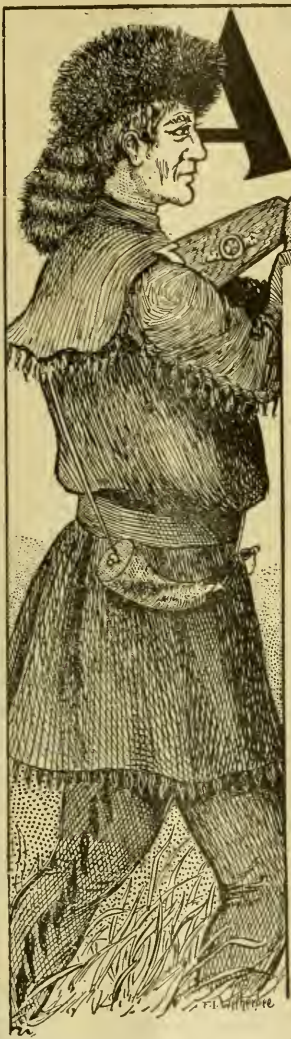

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for health? Have you been BEATING ABOUT THE BUSH, first trying one course and then another, following the lead of others no wiser than thou, only to find that the game will not come within your range?

THE PLACE to HUNT FOR rabbits is where rabbits ARE KNOWN TO EXIST; the place to HUNT for health is where HEALTH HAS BEEN KNOWN TO BE FOUND!

It is beating up the woods where NO QUARRY LURKS to hunt for health in a bottle of alcohol and sarsaparilla, or a package of senna and straw; it is only following the track and trail of hundreds of disappointed, tired and footsore hunters, many of whom have fallen by the wayside.

Let their experience, AS WELL AS THE EXPERIENCE OF SUCCESSFUL HUNTERS, GUIDE YOU! Those who have hunted for health AND FOUND IT, are competent to tell WHERE IT CAN BE FOUND. Thousands of satisfied hunters say the ROAD LEADS TO VITÆ-ORE, that the hunter for health, searching amid its subtle curative, healing and restorative properties, will not be disappointed.

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VITÆ-ORE will do the same for you as it has for hundrds of readers of the American Bee Journal if you will give it a trial. SEND FOR A $1.00 PACKAGE AT OUR RISK. You have nothing to lose but the stamp to answer this announcement. If the medicine does not benefit you, WRITE US SO, AND THERE IS NO HARM DONE. WE WANT NO ONE'S MONEY WHEN VITÆ-ORE CAN NOT BENEFIT. Can anything be more fair? What sensible person, no matter how prejudiced he or she may be, who desires a cure and is willing to pay for it, would hesitate to try VITÆ-ORE on this liberal offer? One package is usually sufficient to cure ordinary cases; two or three for chronic, obstinate cases. WE MEAN JUST WHAT WE SAY in this announcement, and will do just what we agree. Write to-day for a package at our expense, giving your age and ailments, and mention the American Bee Journal, so that we may know that you are entitled to this liberal offer.

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I was a great sufferer from Catarrh of the Bowels for a number of years. After using many different kinds of medicine, in fact, everything that was recommended to me, I almost lost all hope of getting any better until the Theo. Noel Company, of Chicago, sent me a trial package of Vitæ-Ore. After only a few days' use my hopes of a complete cure were again revived, the change being so prompt and immediate. I purchased and used about five packages of Vitæ-Ore, and through this medicine am now again able to wield the sledge hammer and shoe horses and do my blacksmith work as in years when I was younger. My stomach and bowels are better than they have been for thirty years past, and it is all due to Vitæ-Ore. I can conscientiously and truly recommend Vitæ-Ore to all persons suffering from Catarrh of the Stomach and Bowels, and would consider myself, indeed, selfish did I not write and tell what it has done for me, so that others may be cured as I have been.

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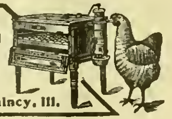

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all, and I have no faith in such men. There are some good bee-keepers here, but they have all the colonies of their own that they can look after; besides, they live several miles away from me.

I am in favor of queen-excluders. Some of my colonies have brood in the two supers, so you see that if I were to try to extract, I could not. It would not do at all, as I have seen some throw out honey and brood, all together. Some honey is not fit for use. I retail all my section honey in the villages.

I am anxious to see how my five colonies in Ohio have stood the winter. They are packed in chaff hives.

We have had a very fine winter here in Florida, neither too hot nor too cool. Peaches are now half-grown.

Success to the "old reliable" American Bee Journal. R. L. McCOLLEY.

Lake Co., Fla., March 28.

Couldn't Hatch Eggs Over Bees.

I, too, tried to hatch eggs over bees. It was a failure, and I had an extra-strong colony for the experiment, well-protected in a double-walled hive in warm weather. The best I could do, I could not get over 75 degrees of heat to the eggs. J. W. STEELE.

Santa Clara Co., Calif., March 11.

Square Section Best—Safe Shipping of Honey.

I believe as does Allen Latham, on page 182, that the 4¼x4¼ section is the best, for different reasons.

In regard to shipping honey, page 181, I would like to ask if the Association could not in some way get a bill passed to prevent the railroads from handling honey so roughly. Why should they be allowed to handle freight in such a manner, when we are paying for safe transportation? The shipping-cases should be marked in a plainer way. The producer ships his honey in good shape, but when it arrives at its destination it is leaking, and a great deal is broken down. Right there is where a great deal of the producer's profit goes. I never see anything more on this subject at any of the conventions.

V. A. HANSEN.

Polk Co., Wis., March 12.

Free-Hanging Frames.

There seems to be quite a difference of opinion among the experts as to free-hanging frames. I wonder how many of them have used the B. Taylor Handy Hive. The frames are hung by a nail on the edge of a strip of tin, with notches for each frame to rest in. The bottom is spaced with a staple that turns upward at a right angle about ¼-inch from the wall of the hive, and points with a slightly forward bend, so as to guide the frames into place. The bees never get caught in these frames, and they very seldon glue them fast, so they can be removed without a jar, or noise to disturb the bees. JOHN MONSON.

Cass Co., N. Dak.

Still Hatches Chicks Over Bees.

I still hatch chicks in bee-hives. It is no fake, and I have no patent for sale. I practice the same at home for my own satisfaction.

I am still in the bee-business. My crop in 1903 was 3000 pounds of comb honey and 1000 pounds of extracted honey. To correct Dr. Miller, I don't put the little boxes in the brood-chamber, but used the Langstroth frames. J. G. NORTON.

McDonough Co., Ills.

Bee-Keeping in Georgia.

I have a very nice apiary of about 40 colonies, but they are weak from the past severe winter. Poplar blossom is our main flow. This yields a dark, thick honey, weighing from 14 to 14¼ pounds to the gallon, and, to my taste, is the finest flavored honey produced. We also have white and red clover and other Southern flowers. I sell my honey as extracted and comb. Sections do not pay here,

Langstroth on the ❋❋❋ Honey-Bee

Revised by Dadant—Latest Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

The book we mail for $1.20, or club it with the American Bee Journal for one year—both for $2.00; or, we will mail it as a premium for sending us **THREE NEW** subscribers to the Bee Journal for one year, with $3.00.

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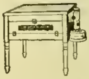
Very little lamp gas in an incubator egg chamber often kills every germ. No gas can possibly creep into the



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because it's heated by our rustless, heavy copper, hot water circulator. Don't waste money and lose good eggs experimenting with poor incubators. Send for free catalogue, B 10 and learn why the Sure Hatch hatches *sure*. **Sure Hatch Incubator Co., Clay Center, Neb. and Indianapolis, Ind.**

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Catalog price on

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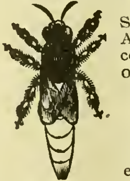

Choice home-bred and Select Imported Stock. All Queens reared in full colonies.

One Untested Queen	$1.10
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" Comb Nucleus (no Queen)	1.80

Tested Select Breeders and Nuclei ready now; Untested in May. Safe arrival guaranteed.

For prices on quantities and description of each grade of Queens, send for free Price-List.

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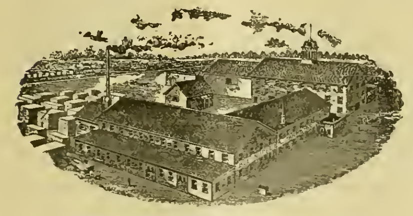

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Queen Bees and nuclei in season. In fact, anything needed in the "Bee-line," at FACTORY PRICES HERE IN CINCINNATI, where prompt service is yours and freight rates are lowest. Special discounts for early orders. SEND FOR CATALOG.

THE FRED W. MUTH CO.
We are successors to nobody and nobody is successor to us.
51 WALNUT STREET. CINCINNATI, OHIO.

and I have abandoned their use. I sell my honey in tin pails, filling them first with comb honey and then pouring on extracted until the pails are nearly full. This arrangement seems best, and meets with ready sale. I believe the above is called "chunk honey." I get about $600 from my bees annually. I get 15 cents for extracted or chunk honey, all sold here in the city. I live 3½ miles from the city and raise my own supplies, so my honey comes in nicely.

Dysentery, spring dwindling, and winter starvation are our drawbacks.

W. H. MORROW.
Fulton Co., Ga., March 30.

European Linden—Catalpa Honey.

On page 152 there is a question about linden or basswood. The European linden is some better than our basswood for "Michigan's" purpose. I advise him to purchase the European linden, but to set out none larger than ¾ of an inch in diameter. I have both.

Regarding catalpa honey, I would say that I have many thousand fine, large catalpa trees, which, when in bloom, are headquarters for the bees. Catalpa honey is colorless, and of extra-good quality. CHAS. WINKLER.
Adams Co., Nebr.

Small Loss in Wintering.

Last fall I had 9 colonies, and now I have 8. When I prepared them for winter I put the one that died on the doubtful list. I prepared them for winter thus: First I made a shed 3 feet wide, 16 feet long, 3 feet at the back, 4 feet in front, and a floor for a protection in front. I took rubber-cloth, such as we use to make side-curtains for buggies, and made a drop-curtain so it could be raised to let the bees fly when the weather was warm enough. Next when I put the bees in the shed I packed straw around the hives except in front, which was protected by the curtain. The shed faces the south on the brow of a hill.

My bees did not have a flight from Oct. 17 until Jan. 9, and again Feb. 6. At this date I fed 3 colonies candy made of granulated sugar, and they are doing well so far. The soft Maple is in bloom, and the bees are gathering pollen from it when the weather is fit.

The white clover is coming up fine; the prospect for white clover is better at this time than last year, which I hope will continue, as it is about the only bloom we have here for honey. JOHN SHARP.
Montgomery Co., Ind., March 31.

Experience with Bees.

I am 65 years old, and can not do any hard work, and I like to work among the bees. I started in the year 1903 with 60 colonies, and got 4300 pounds of extracted honey. I have 71 colonies, packed with chaff in long boxes holding from 3 to 6 colonies each, shingled all around the sides, ends and cover. They are completely covered with snow, but I think they will come through all right, as I had some covered for four months, a few years ago, and they were all right.

I do not want to lose a single copy of the American Bee Journal. EDWARD KNOLL.
Ontario, Canada, Feb. 24.

Hive-Covers—Paper Sections.

I wish to say to Mr. Hasty, page 89, that lard on his canvas covers will keep out the wax-moth and they will get water-proof if you let them lie in the sun 3 or 4 days after putting on the lard. The smell does not seem to bother the bees. I notice that some think that putting sheet-lead on hive-covers, like the English do, would be too expensive. I have a price-list from a Chicago firm which sells sheet-lead for 8¼ cents a pounds, and it runs from 2½ to 12 square feet to the pound. That would make it as cheap as painted muslin, and it would be indestructible. I lived for several years in the West, where the dry weather warps the covers to pieces, and I can say that a cover made from 3½-inch flooring will not warp, when made as I make them. I don't see why sections can not be made of paper of the same thickness as the wooden ones, pressed harder, with a gloss on them. They can be made of white or different colors to suit the taste of the bee-keeper. They would be much cleaner, and I believe much cheaper than the wooden ones.

W. A. MOORE.

Delaware Co., O., Feb. 3.

Severe Winter.

We have 50 colonies of bees all in chaff hives. We had a good season last year, but this has been a very severe winter and I am becoming anxious about our bees, as they have not had a flight since November 12. There is 3 feet of snow here at present.

G. W. GORDON.

Ontario, Canada, Feb. 26.

Getting Bees from High Trees.

My plan for getting swarms down from trees may interest some. It is this: Have a 10-foot ladder made of one-inch boards, four inches wide at the top and five at the bottom, with two thin iron hooks at the top, wide enough to hook over a 3 or 4 inch limb and thus steady the ladder. Then tie the legs of the bee-basket loose enough to straddle a round of the ladder. I made a 16-foot pole, 1¼ inches wide at the bottom and 1 inch at the top. I made it nice and smooth and riveted an iron hook on the upper end, so that I can hook it onto a larger limb and give it a shake, or even hook it onto a little limb and twist it out of the way, or place it anywhere, while I lift the basket and place it where I can spring the limb with the bees on, and give it a little jerk. When the bees are fairly set-

PAGE

THE STRONGEST, TOUGHEST coiled spring wire, woven in the most practical way, makes the best fence, and we would really like to know how the Page Fence lacks in either.
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$12.25 to Buffalo, N. Y., and Return, via Nickel Plate Road, May 10th, 11th and 12th, with return limit of May 23rd. Also lowest rates to Ft. Wayne, Cleveland, Erie and other Eastern Points. Three trains daily, with first-class Modern Equipments. Meals in Nickel Plate dining-cars, on American Club Meal Plan, ranging in price from 35 cents to $1.00; also service a la carte. No excess fare charged on any train on the Nickle Plate Road. When contemplating an eastern trip, write John Y. Calahan, General Agent, 113 Adams St., Room 298, Chicago, Ill. Chicago Depot, corner Van Buren and LaSalle Streets, the only Passenger Station in Chicago on the Elevated Railroad Loop. 5—16A3t

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If your dealer cannot or will not get this wagon, do not buy any other without first informing yourself concerning the Farmers' Handy Wagon. Remember no other is "just as good."

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Poultry Supplies of all Kinds, Seeds and Implements.

Remember, you get these goods at Factory Prices, and save half the freight.

Let us book your order for Golden Italian, Red Clover and Carniolan QUEENS; listed in our Catalog. Send for Free Illustrated Catalog.

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tled, I start down the ladder, with one thing in my hands at a time, for I can hang the shepherd hook anywhere within reach, and if any bees want to cluster above, I can give them another jerk, resting the lower end of the basket on the ladder while I wait for them. I have a veil, gloves, and false sleeves on, so that if they want to alight on me, they may do so. The ladder and pole are both straight-grained, so that they will stand careful usage and be safe. One person can manage this outfit if need be.

W. E. ELLSWORTH.
Kane Co., Ills., Feb. 23.

CONVENTION NOTICES.

New York.—The annual spring meeting of the Fulton and Montgomery Counties Bee-Keepers' Society will be held in the parlors of the Central Hotel, at Amsterdam, N. Y., Tuesday, May 3, at 10 o'clock a.m.

West Galway, N. Y. T. I. DUGDALE, Sec.

Connecticut.—The Connecticut Bee-Keepers' Association hold their spring meeting in the Capitol at Hartford, April 28, 1904, beginning at 10 a.m. All bee-keepers and their friends are cordially invited to attend. A question-box will be opened, and several interesting essays presented. E. E. SMITH, Cor. Sec.

Watertown, Wis.

HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, April 7.—The market is heavily supplied with comb and extracted honey, neither of which are meeting with any demand, especially is this true of the comb. Prices are uncertain, as those having stock are anxious to sell it; therefore it is difficult to quote prices. The best grades of white comb bring 11@12c; anything off from choice to fancy is not wanted. Extracted, white, according to quality, sells at 6@7c; amber, 5@6c. Beeswax, 30@32c.

R. A. BURNETT & CO.

CINCINNATI, O., April 7.—The honey market continues to be dull; if anything, the prices on comb honey are lower; concessions are made on bigger lots. I quote: fancy white comb from 12½@14c. Sales on extracted are made at the following prices: Amber, in barrels, 5¼@5¾c; in cans, ½c more; alfalfa, water-white, 6@6½c; strictly white clover, for extra fancy, 7½@8c. Beeswax, 30c.

C. H. W. WEBER.

PHILADELPHIA, April 8.—Honey is still coming in quite freely, and it is astonishing how much comb honey has been held back by the bee-keepers the past season. As to extracted honey, I believe all the country might have an entire failure of the crop, and we would still have enough to go around held over, if the indications are correct. We quote: Fancy comb, 12@13c; No. 1, 10@11c; amber, 7@8c. Extracted, white, 7c; amber, 6c. Beeswax, 31c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

CINCINNATI, Mar. 4.—The demand for honey is brighter than it has been in the past 60 days. We continue to offer amber extracted in barrels at 5½@6½c, according to quality. White clover extracted is a drag on the market at 6½@8½c in barrels and cans. Comb honey seems to be reviving at 13½@15c for fancy.

Beeswax, 30c. THE FRED W. MUTH CO.

ALBANY, N. Y., Mar. 25.—Honey market dull and getting late; demand falling off for comb honey now. So much comb honey is out of condition, being candied hard in the combs makes most unsalable. We quote: 8@12c; nominal now. Extracted, white, 6½@7c; amber, 6@6½c; buckwheat, 5@5½c. Beeswax, 28@30c. H. R. WRIGHT.

BOSTON, April 9.—Prices remain same as before, which are as follows: White in glass-front cases at 16c; No. 1, at 15c. Supply is ample, and demand light at this time. Extracted, water-white, 8c; light amber, 7@8c; with but little call for dark Florida.

BLAKE, SCOTT & LEE.

KANSAS CITY, April 8.—There seems to be a little better demand for honey; the market is strong at $2.25 for fancy white comb. $2.15 for No. 1, and $2.00 per case for amber. We would not be surprised to see the market make quite a little advance from now on.

Extracted, both in cans and barrels, remains very dull and it takes extremely low prices to move same. Beeswax, good demand at 30c.

C. C. CLEMONS & CO.

NEW YORK, March 7.—The market on comb honey is decidedly dull. There is some demand for white honey, but prices are ruling rather low. We quote fancy at 13@14c; No. 1, at 12c; amber, at 11c, and in round lots even these prices have to be shaded in order to effect sales. There is no demand at all for dark and buckwheat comb honey, and it looks as if some of it would have to be carried over. We quote nominally at 9@10c per pound.

There is a fair demand for extracted honey, at irregular prices, fancy white bringing 6½@7c; light amber, 5½@6c; other grades, 5@5½c; and Southern, common to fair, 50@55c per gallon. Beeswax firm at from 29@30c.

HILDRETH & SEGELKEN.

SAN FRANCISCO, March 30.—White comb, 1-lb. frames, 11½@12c; amber, 8@10c. Extracted, white, 5¼@5¾c; light amber, 4¼@4½c; amber, 3¾@4¼c; dark amber, 3¾@3¾c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

The market is showing very little life, buyers operating slowly, either for shipment or on local account. Such transfers as are effected are at much the same prices as lately current, although the general tone is by no means firm.

ITALIAN QUEENS!

Either Golden or Honey-Queens before July 1.

Our GOLDENS will come up with any other Golden strain. Our HONEY-QUEENS are what some breeders call "Red Clover Queens."

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Untested	$1.00	$ 5.00	$ 9.00
Tested	1.25	7.00	13.00
Breeders	5.00	....	....
2 frame Nuclei (no queen)	2.50	14.00	25.00

Nuclei will be ready to ship the latter part of May or 1st of June. When Queens are wanted with Nuclei add price of any Queen wanted. We guarantee safe arrival of all Queens and Nuclei. Our Breeders may be returned after 30 days if satisfaction is not given. Cash must come with all orders. Orders are booked and filled in rotation.

Mr. Gus. Picaman, of Litchfield, Ill., in a letter of Aug. 3, 1903, says: "Send me two untested honey-queens. The one I bought of you two years ago is all right. There are no better."

Mr. Frank D. Gunderson, of Oconomowoc, Wis., says in a letter dated August 1, 1903: "I like your queens the best of any that I have ever had." This man placed an order last August for 24 Nuclei to be delivered this spring.

Address all orders to

D. J. BLOCHER, Pearl City, Ill.

☞ This ad. will appear every other number.

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16E4t EMMETSBURG, IOWA.

International Convention, Y. M. C. A.

At Buffalo, N. Y., May 11th-15th. Tickets on sale via Nickel Plate Road, May 10th, 11th, and 12th, at one fare, plus 25 cents, for the round trip. Good returning May 23rd. Full particulars, call on your nearest Agent, or address John Y. Calahan, General Agent, 113 Adams St., Room 298, Chicago Ill.

4—16A3t

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ST. LOUIS, 1904.

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ONE FARE FOR THE ROUND-TRIP plus 25 cents, to Cleveland, Ohio, and return, via Nickel Plate Road, May 16th, 17th and 18th. Tickets good going date of sale and returning to and including June 10, by depositing same. Three through daily express trains to Ft. Wayne, Cleveland, Erie, Buffalo, New York, Boston and New England points, carrying vestibuled sleeping-cars. Meals served in Nickel Plate dining-cars, on American Club Meal plan, ranging in price from 35 cents to $1.00; also service a la carte. Chicago depot, La Salle and Van Buren Sts. No excess fare charged on any train on the Nickel Plate Road. Chicago City Ticket Offices, 111 Adams Street, and Auditorium Annex. 'Phone Central 2057. 3—15A5t

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Send name for our Catalog, Samples of Foundation and Veil Material.
We sell the best Veils, cotton or silk.

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OF ALL KINDS.

Langstroth on the Honey-Bee—Revised
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

DADANT & SON, Hamilton, Hancock Co., Ill.

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Mr. Bee-Keeper, Attention!
"Once You Try, You'll Always Buy,"
What? — Lewis' Goods!

HIVES
ELGIN, IA., April 10, 1903.
G. B. LEWIS CO., Watertown, Wis.
DEAR FRIENDS:—I have received the 50 Bee-Hives and I can say that they are the nicest, finest and best hives I have ever seen. I thank you for sending me such fine goods, and later on if I should need any more hives I shall surely buy them of you.
Your truly, TOFIELD LEHMAN.

SECTIONS
RICEVILLE, IA., R. R. No. 1, April 3, 1903.
G. B. LEWIS CO., Watertown, Wis.
GENTLEMEN:—During the last four years I have bought 10,000 sections from three different firms. Before, I had used yours for several years and have decided, after a thorough trial, that yours are the best and most perfect sections in every way that I have ever used.
Yours truly, DAVID FOOTE.

PROMPTNESS
CLARENCE, IA., Aug. 19, 1903.
G. B. LEWIS CO., Watertown, Wis.
GENTLEMEN:—I would like to thank you for your prompt way of doing business in such a season as this when everyone is excited.
Yours truly, E. W. COE.

ACCURACY
NATIONAL HOME, WIS., Sept. 21, 1903.
G. B. LEWIS CO., Watertown, Wis.
GENTLEMEN:—I consider your freedom from mistakes quite wonderful, considering the variety and number of pieces in the various lines of goods you carry. Therefore I should be very slow about saying anything until I had made a most careful examination. Everything, however, is all right. Yours truly,
W. C. GIBSON.

NOTICE.—We are now represented in Minnesota by Wis. Lumber Co., Faribault. Mr. F. C. Erkel, Minneapolis, has no connection with us whatever.

G. B. Lewis Co., Watertown, Wis., U.S.A.

More Colonies or Manipulation?
DR. C. C. MILLER.

Comb or Extracted Honey?
C. P. DADANT.

MASSACHUSETTS AGRICULTURAL COLLEGE

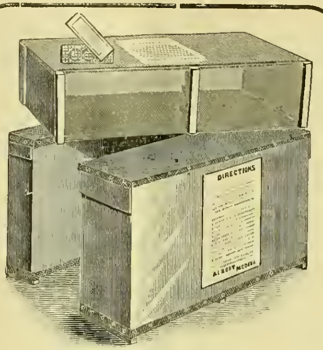
AMERICAN BEE JOURNAL

WEEKLY—$1.00 A YEAR.
Published by GEORGE W. YORK & CO., 334 Dearborn Street.

44th Year. CHICAGO, ILL., APRIL 28, 1904. No. 17.

APIARY OF WM. M'EVOY, OF ONTARIO, CANADA.

Have You Lost Your Bees?



SHIPPING BOXES FOR BEES.

Save Your Combs.

The winter losses in some parts of the country are heavy, and the demand for bees and queens will be large. Parties needing queens should send their orders at once, and state date when shipment is desired.

Early Italian Queens.

We are fortunate in being able to offer for April and May delivery a large stock of queens from our Southern breeders. While we have a much larger supply than ever before, it is highly important that you send your order at once to secure the queens when desired, as we will fill orders in rotation. We expect to be able to furnish untested queens from our Southern yards, in any number, after April 10th. Send your orders at once.

Prices of pure Italian Queens, untested, from our Southern yard for April and May shipment.

	1	12	50	100
Untested	$ 75	$ 8.50	$35.00	$ 65.00
Select Untested	1.00	11.50	47.50	77.50
Tested	1.50	17.00	70.00	130.00
Select Tested	2.50	28.50	——	——

Prices of Our Red=clover and Honey Queens.

Untested queen	$ 1 00	Select tested queen	$ 3 00
Select untested queen	1 25	Breeding queen	5 00
Tested queen	2 00	Select breeding queens	7 50
Extra select breeding queen, one year old			10 00

We book orders, and fill in rotation.

Imported Italian Queens.

We are prepared to furnish from the best breeders in Italy, imported Italian queens. They are put into our own yards and tested before sending out. We have only two grades—best, and fair imported, and prices are given in the table below.

Best imported queens	$5 00	Fair imported queens	$3 00

The Root Queen-rearing Outfit.

In this outfit are embraced the best points of the best systems in use. It will give satisfaction to the amateur as well as the expert. The cell-cups are made of wood, wax-coated. No melted wax is used in their manipulation, as they are attached to the cell-stick by means of a small nail-point.

The nursery-cage combines the features of nursery and introducing cages. By their use a queen can be released on the candy plan or caged in the hive as desired.

In connection with the outfit goes a booklet on queen-rearing—one which ought to put the veriest amateur on the high road to success. Outfit comprises three cell-bars with 50 waxed wooden cells, one frame of cages (18), one cell-forming stick, set grafting-tools, and a book on queen-rearing..................$4.50

If sent by mail, add 50c for postage.

Tools for Queen-breeders.

Wooden cell-cup with point for attaching to bar, 50c per 100; $4.00 per 1000.

Same, waxed ready for use, 75c per 100; $6.00 per 1000.

Titoff wire nursey-cages, 15c each; $1.35 per 10; $12.50 per 100.

Frame for holding 20 cages, including cages, $3.00.

Cell-stick, 10c each; $1.00 per dozen.

Transferring needle, double-ended and nickel-plated, 15c.

Jelly-spoon, nickel-plated, 15c each.

We can supply, also, fine-pointed lace-scissors with extra large bows, for clumsy fingers, at 35c each.

Nuclei and Colonies of Bees.

We are prepared to furnish one, two, and three-frame nuclei and full colonies of bees in eight-frame Dovetailed hives or Danzenbaker hives. The nuclei are put up in light shipping-boxes made of basswood, the sides of which are only $\frac{3}{16}$ inch thick, and the ends $\frac{1}{2}$ inch. The top and bottom are covered with wire cloth. This makes a very light package, affords plenty of ventilation, and is strong enough to stand shipping 500 to 1000 miles.

Any of our nuclei, even the 1-frame, will make good strong colonies by fall if properly handled. The three-frame if properly managed can be increased four, five, or even ten full colonies by fall if bought now; and instead of having any black bees, one will have in the beginning pure Italians of the choicest stock throughout his apiary.

PRICES OF NUCLEI.

One-frame nucleus without queen	$2 00
Two-frame " " "	3 00
Three-frame " " "	3 50
Full colony in 8-fr Dovetailed hive	7 50

We can furnish with the nuclei any queen mentioned in the table of prices of queens.

One-frame Nucleus--This contains a frame partly filled with brood and bees. The condition of the hives at different seasons of the year vary so that we can not always put up nuclei in the same way; but in every case we aim to give full value. Weight about 7 lbs.

Two-frame Nucleus--This is just the same as our one-frame nucleus, except it has twice the amount of bees or brood, or of both. The box is larger, and holds two frames—one full frame of brood, or two frames partly filled. Shipping weight, about 10 lbs.

Three-frame Nucleus--This is three times the size of the one-frame nucleus, and is made up in the same way as the one and two frame. Shipping weight, about 15 lbs.

A Full Colony will contain 8 Langstroth frames in Dovetailed one-story hive—three full frames of brood, or equivalent, in six combs, and enough bees to cover fairly all the combs. No queen is furnished at the table price. Purchaser is to seclect the queen and add her price to that of the bees. Our colonies are all put up in new Dovetailed or Danzenbaker hives, painted two coats. Shipping weight about 40 lbs.

Special Offer!

Gleanings in Bee Culture one year, and one untested Italian Queen from our Southern yards.................................**$1.00**

We begin shipping at once. Orders filled in rotation. Do not ask for special arrangements; at this low price we can't make exceptions.

Gleanings in Bee Culture one year, and one untested Red-clover Queen for **$1.50**

We begin shipping these queens about April 15. Orders filled in rotation.

Guarantee.

We agree to deliver queens in good order to any part of the United States or Canada, from April 15 to October. In case of queens valued at $5 or more, we ship in a one-frame nucleus, (no charge for nucleus). If a two-frame or three-frame nucleus is wanted, add to the price of the queen the difference in price between the one-frame and the two or three-frame. Losses must be reported on arrival.

We can make Shipments of Nuclei from

Cincinnati, Ohio, Philadelphia, Pa.,
New York City, Medina, Ohio,
Wharton, Tex., High High Hill, Mo.,
St. Paul, Minn., Augusta, Kans.

This will give you very low Express Rates.

THE A. I. ROOT COMPANY,

Main Office and Works, Medina, Ohio, U. S. A.

BRANCHES: BRANCHES:

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ESTABLISHT IN 1861
AMERICAN BEE JOURNAL
THE OLDEST BEE-PAPER IN AMERICA
Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

GEORGE W. YORK, Editor. CHICAGO, ILL., APRIL 28, 1904. Vol. XLIV—No. 17.

Editorial Comments

Shipping Comb Honey to Market.

Some time ago we were called to examine a small shipment of comb honey that had come to Chicago from a distance of perhaps 300 miles by freight

It was not properly packed in large crates with straw or hay in the bottom. So the honey was in a dilapidated, broken-down condition. There were several sizes of sections, set in different ways, in the same shipping-case. Honey that was granulated was mixed in with the nice, ungranulated. The whole thing was pretty much of a mix-up. If the dealer got 8 cents a pound for the lot he did well.

And yet we have no doubt the producer who shipped it thought he was sending to market a very fine lot of honey.

It is unfortunate that some bee-keepers will not first try to find out just how to prepare honey for shipping. The result is that on a single shipment they sometimes lose enough to pay for all the books and a year's subscription to all the bee-papers that are published in America to-day.

The best and more experienced bee-keepers are the ones who appreciate current bee-literature the most. Then how much more should the inexperienced value it? It pays to inform oneself thoroughly in one's business or work. There is really no good excuse for any bee-keeper to-day going without all the necessary information. It can be had for so small a cost.

Patents in Bee-Keeping.

Occasionally there arises one in the bee-keeping line who thinks he has some invention that is going to revolutionize the industry of bee-culture. He therefore patents it. Perhaps in the majority of cases it is a new kind of bee-hive. His special hive will simply compel the bees to store lots of surplus honey! But it is mostly on paper, or "in his mind."

After making a careful examination of all the apiarian patents ever granted in this country, Editor E. R. Root gives this as the result of his investigation:

> Nine-tenths—yes, I am safe in saying ninety-nine percent—of all patents relating to bee-culture have been issued to men—can hardly call them bee-keepers—who have had almost no practical knowledge of the general principles covering hive-construction and the general habits of bees. The great majority of these useless inventions, even if they would accomplish what was expected of them by the brilliant (?) geniuses that evolved them, would have absolutely no sale, for the simple reason that the dear public is not going to pay for something for which it has absolutely no need. Let me give a few illustrations of some of the wonderful (?) inventions.
>
> One inventor got up a hiving-apparatus that consisted of cog-wheels, shafting, chain-gearing, and elaborate frame-work, for dumping a swarm, after it has clustered, into a hive. The whole apparatus would cost a hundred times as much as any swarm is worth. And, just think of it! here was a man who had the temerity to pay out $100 for a patent covering something he supposed would have a demand! Was he after glory or money?
>
> And then the devices that were gotten up to catch the moth-miller! The amount of brains and time that has been spent on this one subject alone is enough to have made a nice little fortune. We have something like 1500 apicultural patents in our office, which number comprises the entire list. Probably a fourth of them is devoted to moth-traps—say there are 300; then let us estimate $100 as the cost of each patent, or $30,000. This amount went into the hands of patent attorneys. Besides, this is loss of time, which, if it had been spent behind the plow-handle, would have made another fortune.
>
> It does seem as if the general government ought to have an expert to pass on the practicability of some of the subjects that come up for patents. This would afford protection to some fools who need to be saved from themselves, and save thousands of dollars; but it might also throw thousands of quack attorneys out of business.
>
> If there were an expert in each department who would rule out certain inventions that have no value, it would save good dollars, wasted efforts, and blighted hopes. But the government does do something in this line to a certain extent.

We certainly would not try to discourage real inventions, but how silly it is for one, who has had perhaps only a few months' experience with bees, to think that he is able so to improve the hives and other fixtures of beedom as to revolutionize the business, and himself command wealth and fame! How very many devices have been patented that never were in sufficient demand to pay the cost of securing the patent. In the twenty years that we have been connected with bee-keeping interests, we can not recall a half-dozen apiarian inventions that ever paid the expense of having them patented. It's discouraging to would-be inventors in this line, but it is history that is well worth heeding.

The Uncertainties of Bee-Keeping.

We suppose there is scarcely another calling or occupation that contains so many uncertainties as does that of bee-keeping. But these very probabilities are what give to the subject some of its greatest interest. If all knew in advance just what the future is to be, would they be any better off? Hardly. Often it is a good thing—a blessing—that no one knows definitely what is to happen later on. Of course there are occasions when it might be well to know, but in the great majority of cases we believe it is much better that things are as they are.

Not to know just how matters will result, should be an incentive to do all we can—our very best—in order that whatever the result may be, we can feel that we did what we could—lived up to our best light and endeavor.

The varied uncertainties of bee-keeping come rather harder on the bee-papers than anywhere else. With farming it is different. A man who buys a farm does so with the intention of doing something at that business for a term of years—perhaps for life. But many of those who begin to keep bees do not give them the required attention, and at the proper time. Such seem to think all that is necessary is to buy a few bees, put them in a particular kind of patented hive, and then forget about them until time to take off the honey crop. By that time, if there isn't a hundred pounds or so to the colony, they think bee-keeping doesn't pay!

The fact is, there are too many people who take up bee-keeping just as any other fad that strikes their fancy. For a time "they run well," and then they're "all run down." Perhaps they have bought a bee-book and subscribed for a bee-paper—neither of which has been carefully read and directions followed. The next thing we hear they are "out of the business." No wonder. They never got fully into the business of bee-keeping. The only way to do anything is *to do it*. It requires determination, and a willingness to apply oneself to the work. "There is no excellence without labor." No success without it, either.

Now, if there are any among our readers who are dilly-dallying with bees, and yet expect to be successful in the work, better take an inventory at once of your determination to succeed, your enthusiasm in the work, and your willingness to comply with the requirements of the business. If you find yourself lacking in any respect, take a new hold—a better grip—and go forward to win. Others have been successful, so can you be.

Winter Losses of Bees.

On page 359 we gave a partial report of the losses of bees the past winter as gathered and condensed by Gleanings in Bee-Culture. Since then the following further information has been given out:

> In a previous issue I gave a summary of the hundreds and hundreds of reports that had been received from all sections of the country within a radius of a thousand miles of Medina. More reports have come in, largely confirming those first received—namely, that the winter losses for *outdoor* bees (not indoor) have been exceptionally heavy—problably the heaviest for over 20 years. The losses for the various States stand about the same as those indicated in our last issue, *except* that Michigan now appears to have suffered the most. Next come Ohio, New York, Pennsylvania, Wisconsin, Indiana. Strangely enough, no severe losses are reported in Illinois and Iowa. The States suffering the most are those bordering on the great lakes; and the one almost entirely surrounded (Michigan) appears to have lost the most bees. The reports go to show further that there are very few losses in any of the districts where the bees were wintered *indoors*.
>
> Outside of these lake States the losses have been comparatively light except along the Atlantic coast and in a few scattering localities in New England. It appears that the matter of humidity, as well as cold, has something to do with the severe losses among the outdoor bees.
>
> In nearly all the Western States, and all the States south of the Ohio River, the bees have wintered well. In Colorado and Idaho, where it is as cold or colder than the lake regions, the losses appear to be very light.
>
> We have received scarcely any reports from Canada. This seems to indicate that the majority of bee-keepers there winter indoors.

We have received some reports from Canada, which show heavy losses of bees there as well as here. It was a fearfully long winter. In fact, it is still cold here (April 20). But our close proximity to old Lake Michigan has much to do with the late cool temperature these days.

LATER.—Since the foregoing was put in type, Gleanings for April 15 has arrived, and contains the following paragraph:

> Winter losses throughout the northern portion of the country are about the same as reported in our last. Michigan and New York, as before, lead off with the heaviest mortalities. Reports are beginning to come in from Canada, showing losses both in Ontario and Quebec—much heavier than usual. Some of the States along the Atlantic coast are reporting anywhere from 30 to 90 percent of the bees dead. The losses still seem to be confined mainly to bees wintered outdoors, and to those bee-keepers who have had a short experience.

Miscellaneous Items

A Correction.—On page 279, in the first column where it reads: "Entrances are enlarged to their fullest extent, 1¼x12 inches," it should read 1½x17 inches. With a 12-frame hive a full-width entrance could not be less than that.

Mr. Morley Pettit, of Ontario, Canada, in whose article the above error occurs, wrote us April 18, saying there was a 10-inch fall of snow at his place April 15. They had a sleigh-ride on the 16th. He expects a heavy loss of bees by starvation in his locality. He had fed his own bees, but of course there will be many who are less wise than he. Bees had gathered no pollen up to the time of his writing.

* * *

Mr. G. M. Doolittle, of Onondaga Co., N. Y., writing on his 58 birthday, April 14, had this to say:

> I have been nearly sick all winter with grippe, or something like it, and about a week ago I was taken very much worse, and had a hard time for five days, but I am getting better now, and hope to soon be up again.
>
> Outdoor-wintered bees have had but one flight since Oct. 30, and that was on April 5, so they were confined to their hives 5 months and 6 days, with the mercury at from zero to 30 degrees below nearly half of the days during the time. We now have about 6 inches of snow, and the mercury goes as low as 16 degrees, Fahr., nearly every night. Ninety percent of the bees left outdoors are dead. Mine are still in the cellar, apparently all right. G. M. DOOLITTLE.

Pa and Ma and the Bees.

The man that brought the hive of bees firs' set them by the path
(Oh, the bees were full of vigor, and were also full of wrath),
An' he said: "It might be better to leave 'em, like es not,
Till I hear from Mr. Perkins, where he'd like to have 'em sot;"
An' 'bout that time my Ma come out dressed in her Sunday best,
An' she tumbled o'er that bee-hive, an'—I hate to tell the rest;
For we all got mixed up in it, and the atmosphere was shot
With bees an' language of my Pa—an' both of them was hot.

Ma turned to speak to Susan: "Whatever may occur—"
Then she tumbled o'er the bee-hive, and it tumbled over her;
An' it seems to me I hear it yet, her piercin', curdlin' yell
When the bees come out to greet her an' they fired their shot an' shell;
An' they prodded with their lances, an' they stung her with their darts
On her face an' on her shoulders an' her hands an' other parts;
An' Ma kep' on a-yellin' till I thought my blood would freeze;
Then Pa come round the corner to see what ailed the bees.

Well, he found out middlin' sudden, for the biggest of the hive
Firs' landed on his eyebrow, an' my Pa said: "Man, alive!"
Then they peppered him all over, an' settled in his hair,
An' his language was disgraceful—it was different from a prayer!
Then my Ma an' Pa, united, rolled together on the walk,
An' her shrieks, though ruther movin', wasn't touchin' as his talk;
While the bees kept stingin', stingin', just as if they meant to say:
"You will kindly please to notice that this here's our busy day!"

We turned the fire-hose on them, an' Pa remarked: "It's nice,
But I think it would be better if you'd pack us both in ice,
For them bees, I want to mention, lest you make a grave mistake,
Is the hottest little insec's this side of Brimstone Lake;"
An' six days later, when they both had convalesced somewhat,
Said Pa: "This weather's warmish, but there's only bees that's hot;"
An' he turned to Ma, an' said: "To prove our gratitood,
We'll give them bees unto the poor—'twill save 'em coal an' wood!"
—ALFRED J. WATERHOUSE, in *Sunset*.

* * *

Dr. C. C. Miller, of McHenry Co., Ill., wrote us April 20, as follows:

> What a spring! Here it is April 19, with the thermometer below 40 degrees on a bright, sunny day, and within a week it was down to 22 degrees. I got my bees out April 5, 6, 7, and little chance they have had to fly since. To my surprise I lost some by starvation, although I thought they had abundant stores. So they had for plain cellaring; but I find it's a different proposition with a furnace in the cellar and the temperature averaging 50 degrees, and sometimes running up to 60 degrees. With plenty of ventilation they winter bright and nice, but they eat a good deal more.
>
> Although the bees can not do anything, the clover can, and it's growing right along in the cold. The problem will be to get colonies up to proper strength to take care of it when the bloom comes.
>
> I took out some colonies for a flight March 7, returning them after their flight, and I can't really tell whether they were better or worse for it. C. C. MILLER.

* * *

Mr. S. T. Pettit, of Ontario, Canada, wrote as follows April 10:

> "We had a big snow-storm last night, and the whole country-side is covered with 'the beautiful' to-day."

We notice by the foregoing that it is still cold over in Canada. We are having a very late spring here in Chicago, also. Bees have had only two or three days up to this date (April 19) on which they could fly at all, since last fall. It is making a very long confinement, and no doubt there will be a heavy loss in bees in this part of the country. It has been too chilly to examine bees that have been wintered outdoors, in order to supply any food that might be necessary to carry them through the spring.

* * *

Mr. Herman F. Moore, of Park Ridge, Ill., Deputy Foul Brood Inspector for Illinois, wishes all who have been damaged by foul brood from diseased bees, shipped by one or more queen-breeders or dealers in bees in Southern Illinois, to write to him, stating the facts. This may benefit all interested in bees.

Convention Proceedings

Report of the Ontario Bee-Keepers' Convention Held in Trenton, Dec. 1, 2, and 3, 1903.

BY MORLEY PETTIT.

(Continued from page 294.)

REPORT OF THE INSPECTOR OF APIARIES.

During 1903 I visited bee-yards in the counties of Huron, Middlesex, Perth, Brant, Peel, York, Ontario, Simcoe, Norfolk, Haldimand, Victoria, Lanark, Leeds and Russell. I inspected 96 apiaries, and found foul brood in 28 of them, and dead brood of other kinds in many others, which had been mistaken foul brood. Some of the dead brood was the result of spraying fruit-trees while in bloom, and in other places I found it to be starved brood, and not foul brood at all. I received orders to go to certain localities as soon as possible, where some men claimed that they had located several cases of foul brood. When I got there I found that the big losses in bees were the result of starvation. After that I received orders to go to other localities where several apiaries were said to be very bad with foul brood, and when I got there and examined every colony I found them completely cured, and not a trace of the disease left.

No Province or State in the world was in as bad a condition with foul brood as Ontario was when I was first made apiary inspector of the Province, 13 years ago last spring. It took time to get the people taught so that they could cure all diseased apiaries by my methods of treatment from May to October, and at the finish to have every colony in first-class condition since that time. It is over 28 years since I discovered how to cure any foul-broody apiary from May to October. If I had been able to cure only during the honey season I never would have accomplished much, or have been of much use to the Province if I had not been able to finish up the curing with my fall treatment, where the mistakes were made.

I have driven over 90 percent of the disease out of the Province since 1890, and if the bee-keepers had sent me in a list of the diseased apiaries like they used to do, so as to give me a chance to know where the disease was, and then helped like they should have done, by this time I would have had the disease all out, or nearly so.

No man in Ontario knows the true condition of things as well as I do, and I positively declare that Ontario has not one-tenth of the diseased apiaries now that she had ten years ago. The disease is now completely under control, and all that any person has to do is to send in a list of the diseased apiaries, and have them cured, and cured in the most profitable way, at that. WM. McEVOY.

J. C. Morrison—Mr. McEvoy has done a great deal for bee-keepers of Ontario, and personally I have been in the past indebted to him for help in getting rid of the disease. The McEvoy cure is *the* cure, and McEvoy is *the* man for inspector; but when he tells us that foul brood is on the decrease in Ontario, I think we are justified in criticising the statement. He told us at Barrie, in 1902, that it was stamped out except in the northern country. In the early part of this year, in a letter to the press, he says that there are a few diseased apiaries in the county of Norfolk, a few in Simcoe, a few in Western Ontario, and some Down East. Instead of only in the North, it is decreasing by spreading east, west, and south. Foul brood on the decrease? So are bee-keepers. Five years ago Mr. McEvoy cleaned the apiary of John Kidd; this year foul brood cleaned him. Five years ago he cleaned an apiary at Craighurst; this year he cleaned the same apiary by the firing method, and justly so. This year, in our own county of Simcoe, we find it in Beeton, Cookstown, Egbert, Alliston, Craighurst, and Jarrats Corners. Look for a moment at the decrease as shown in his reports. He visited in—

1899	in	13	counties	126	apiaries of	which	40	were	foul.
1900	"	12	"	100	"	"	30	"	"
1901	"	12	"	77	"	"	29	"	"
1902	"	12	"	91	"	"	30	"	"
1903	"	14	"	96	"	"	28	"	"

How long at this rate will it take to clean Ontario?

Mr. Holtermann stated that the report sent out by the inspector during the past year was entirely incorrect. He knew of the disease in north and south Norfolk; it was very bad there, many apiaries had robbed out. It was in Brant, in Muskoka, Grey, York, Perth—something must be done. The law required amendments, and it had not been upheld by the officers of the Association. Bee-keepers did not know any longer to whom to write. All was confusion. Some were afraid to criticise McEvoy for fear of the harm he could do them. No better man could be found for Mr. McEvoy's position if he would act in an impartial, fair, and thorough manner.

The general feeling was that the duties of Foul Brood Inspector of Ontario were too great for one man, even of Mr. McEvoy's ability. The latter admitted that in some things he had overstepped his authority.

The following were appointed a committee to revise the Foul Brood Act: Messrs. Wm. McEvoy, J. L. Byer, J. C. Morrison, R. F. Holtermann and Jas. Armstrong.

Messrs. McEvoy and Byer withdrew from the committee.

ADDRESS BY PROF. C. C. JAMES.

Prof. C. C. James, Deputy Minister of Agriculture, delivered an address in the evening. He said he was very pleased to be present at this convention of bee-men. It was the wish of the Department to keep in close touch with all that was being done by the various agricultural associations. He and Mr. Dryden had often remarked in looking over the reports that the members of this Association appeared to be living up to the business. The discussions appeared to contain both the sting and the honey of the bees. He was glad to see that the members, even in a heated discussion, did not forget to act the gentleman.

Your secretary, said Prof. James, has a letter from the Minister of Agriculture, suggesting an exhibit similar to the annual Guelph Live Stock Exhibition. This is the greatest educational Fair held on the continent. We have thought that a Fair might be inaugurated for fruit and honey interests. We may have a Fruit Fair next year, showing fruit and implements used in fruit-growing, etc. Let the bee-keepers join in with it. It would be a fine thing to have an exhibit of fruit, honey and flowers at Toronto next year, and have the annual meeting there at the same time as the fruit-growers meet. We would, of course, need to start on a small scale.

The Professor expressed regret that this body of men came to Trenton so late in the year, when the natural beauties of the place were obscured by winter The gateway to one of the most beautiful spots in all Canada is Trenton. It is historic ground. Years ago the French fur-traders went up and down through the Trent valley. It is almost 120 years since the first settlers came in. Surveyors came up from Quebec to lay out the country for United Empire Loyalists early in 1784; and 1784 to 1904 is 120 years.

The agricultural development here is one of great progress and interest. It is a matter for regret that our school text-books make no reference to this. Too much attention is given to political development. Surveyors began at Kingston, numbering the townships as they went. Unfortunately these numbers have been replaced by names in later years.

From 1784 to 1814, a period of 30 years, or one generation, methods of agriculture were very crude. They had to cut down the trees to get at the land, and their principal products were timber and ashes. These were exported to the United States, the timber being floated down the streams.

From 1814 to 1844 they had cleared enough land to grow grain for export. Then wheat was King.

During the third generation—1844 to 1874—there was a great movement to this country from England, Scotland and Ireland. After the conclusion of the Napoleonic wars the disbanded soldiers became the beginners of a great stream of immigration. As these counties are the homes of the best breeds of live stock, the immigrants brought with them the nuclei of our choice herds of the present day.

The fourth generation—1874 to 1904—is noted for its great development in the production of more finished articles, such as cheese, butter, eggs, fruit, honey. To produce and market these profitably special organizations have sprung up, so that we have live stock, dairy, poultry, fruit, and honey interests, represented by special associations.

The question naturally arises, What shall the next generation bring forth? This is no longer a grain-growing country. Ontario stock-breeders annually sweep the boards at the Chicago Live Stock Show. How is it? To start with, we have a country eminently adapted to stock-raising. We have the soil, climate and water. Here, as nowhere else on the North American Continent, are men likely to continue to specialize along this line. In fruit-growing the possibilities are unlimited. Alongside the development of the fruit market we must work honey as well. There is an unlimited market for first-class goods, not for second-class. We should not produce second-class fruit nor honey. There is only one way of keeping the market, that is, keep the quality up.

High railroad rates are at present a great hindrance. The government will probably have a railroad commission soon, and this Association should have a committee ready prepared to meet it.

A vote of thanks was tendered Prof. James for his excellent address.

A railroad committee was appointed.

OFFICERS FOR 1904.

The officers for 1904 were elected as follows:

President, J. W. Sparling; 1st vice-president, H. G. Sibbald; 2d vice-president, R. H. Smith; directors: District No. 1, W. J. Brown; No. 2, J. K. Darling; No. 3, M. B. Holmes; No. 4, C. W. Post; No. 5, J. W. Sparling; No. 6, H. G. Sibbald; No. 7, Geo. Wood; No. 8, Jas. Armstrong; No. 9, R. H. Smith; No. 10, G. A. Deadman; No. 11, J. F. Miller; No. 12, Samuel Wood; Ontario Agricultural College, Prof. F. C. Harrison; inspector of apiaries, Wm. McEvoy; and assistant inspector, F. A. Gemmill.

It was decided to withdraw the grant and representatives from London, Toronto, and Ottawa fairs.

Committee to revise report: Messrs. Sibbald and Pettit.

Auditors: Messrs. Nolan and Byer.

Next place of meeting, Toronto.

Mr. Fixter, of the Ottawa Experimental Farm, described a fancy trophy of Canadian honey to be put up at the Louisiana Purchase Exposition at St. Louis in 1904.

It was decided to offer every encouragement to the St. Louis Exposition.

The report of the committee to revise the Foul Brood Act was then taken up. The report was adopted without a dissenting voice, the main change being the appointing of sub-inspectors in organized districts.

The Secretary read a communication from Prof. Harrison, stating that he had not been supplied with specimens of foul brood to continue his study of the disease. It was moved by Messrs. Holtermann and Couse that this matter be not neglected next year.

The Transportation Committee appointed to meet the Railroad Commission consists of Messrs. Lott and Couse.

The convention then adjourned to meet at Toronto in 1904.

Contributed Articles

More Colonies or More Manipulation—Which?

BY DR. C. C. MILLER.

MR. TOWNSEND thinks it better to increase the number of colonies and avoid extra manipulation. Mr. Doolittle thinks it better to increase manipulation rather than colonies—page 247. When two such successful and experienced practitioners hold exactly opposite views "the point is worth cosidering" a little farther.

Is it not possible that both gentlemen are right, each from his own standpoint? Mr. Townsend, if I am not mistaken, is located where it is easy for him to increase the number of his colonies or his apiaries to a considerable extent without any fear of overstocking, while in Mr. Doolittle's locality the field has been for years pretty fully occupied.

Suppose that Mr. Townsend has only 100 colonies instead of his present number, and suppose that by manipulation (including in that term spreading of brood and stimulative feeding) he can increase the crop stored by those 100 colonies one-fourth. Please don't understand that one-fourth is the amount of the increased harvest that manipulation will secure; I don't know what it is, but the argument will be the same whether it be one-fourth or one-fortieth. Mr. Townsend does not need to consider the question of nectar—nectar will go to waste were there twice as many bees; so it seems clear that with one-fourth more colonies he ought to get one-fourth more honey; and the only question for him is whether it is easier to care for 100 colonies with manipulation, or 125 without. Evidently he takes the latter view.

Suppose Mr. Doolittle has 100 colonies where manipulation will make that 100 colonies exhaust all the nectar within reach; in such a case he has shown quite clearly (page 247) that more colonies mean less money *for him*; and Mr. Doolittle has done good service in calling attention to the importance of a factor too little considered—the amount of honey consumed by the bees themselves. Observations at the Swiss experiment stations, if I remember correctly, put the annual consumption of honey by a colony of bees at 70 pounds, which, although, much smaller than the estimate of Mr. Getaz and Mr. Doolittle, is probably much larger than the amount the generality of bee-keepers have thought of, if indeed they have given it any thought at all.

For each bee-keeper, then, in considering whether he stands with Mr. Townsend or Mr. Doolittle, comes first the question, "Is there plenty of nectar available so that after increasing there will still be more than the bees can gather for both themselves and me?" With the majority of bee-keepers the danger-point has not yet been approached, probably; and with a great many the increase of colonies may be carried to such a point as to make the increase of harvest much beyond what manipulation could bring without such increase.

In some cases there might be both increase of colonies and all the added stores to be secured from extra manipulation. With some, who have an unlimited field and limited time to care for colonies, the most profitable way would be to have the full number of colonies that could be cared for without extra manipulation. Mr. Doolittle's friend who proposed to double his number of colonies and lessen the amount of labor with each, was probably right in thinking this would give him more honey, *if* after the doubling of colonies there was still more nectar than the bees could gather.

In making a case, Mr. Doolittle makes it a little too strong in one point. He calls attention to the increased amount of honey that an inceased number of colonies would need for their own consumption, but ignores the increased amount needed for the increase of bees secured by extra manipulation. It must not be forgotten that in each case there is an increase of *bees*, and if there be the same increase of bees by one method as by the other, then there will be exactly the same increase of consumption. Although that argument is thus ruled out, there is still an advantage left Mr. Doolittle in the fact that stronger colonies store more honey in proportion to the number of bees. A colony of 50,000 bees will give more surplus than the same number of bees in two colonies, because a smaller number of bees will be needed to do the homework of the larger proportion of gatherers in the large colony.

After all this has been said, there still remains an important point that is "worth considering." Are we always sure of increased stores from the extra manipulation? In this locality, at the time such manipulation would be effective, there is already in the hive all the brood the bees can cover in most colonies, in which case spreading brood can only mean chilled brood. Spreading brood and stimulative feeding are two pretty safe things for beginners to let alone, at least in most localities. McHenry Co., Ill.

No. 5.—Comb or Extracted Honey—Which?

BY C. P. DADANT.

THE greatest disadvantage, I might say the only disadvantage, in producing extracted honey is in the selling of it. "Strained" honey in this country originally acquired an unenviable reputation, at first, from its having been produced by squeezing the honey out of the combs of colonies caught in the woods, from bee-trees. This honey was often mixed with pollen and residue, and more or less cloudy, therefore inferior. Then with the discovery of the extractor and the production of clean liquid honey on a large scale, the temptation to imitate it by adulterating it or even by selling pure glucose under the name of honey by unprincipled dealers gave another warning against it to the consumer. On the other hand, very few people knew that honey in the liquid state granulates in cold weather, and a very great prejudice formed immediately against honey which, some consumer put it, "seems to be all sugar." But wherever the consumers were acquainted with the methods of production and the quality of the article, the sale was unlimited. There would be no end to the sale, and prices would be very good, and, in fact, as high as those of comb honey, if all the people could be convinced by plain evidence that the honey offered is pure and wholesome.

It is true that there is suspicion, as well, regarding the purity of comb honey, and we often meet people who look upon sealed comb in sections with distrust, as if they expected to see a trace of the mold in which it was cast; but this very unreasonable suspicion which has been brought about by silly newspaper stories, is easily overcome. It is sufficient to call the attention of the consumer to the constant irregularity of the combs in sections—of which no two are alike—to convince them that no human hand has ever built them, filled them and sealed them. For the combs of the bees are another example of the wonders of Nature—variety in uniformity.

With extracted honey, the only evidence that the buyer can have of the purity of the honey he purchases is his own palate. If he will taste honey and adulterated sweets, side by side, he can soon be convinced, by the sweetness of the former and the lack of it in the latter; but how many consumers rely on their own sense of taste?

So in the selling of extracted honey we have to stumble every day on fresh obstacles. In every new field we have the same objections, the same accusations of dishonesty, however groundless they be. It takes years after years in the same market to put the stamp of genuineness on our goods. But when this is achieved, the sales are easy and large. In our immediate vicinity, some 35 years ago, it was difficult to get rid of a few hundred pounds of extracted honey. To-day more than five times the number of bees are kept, and although extracted honey is harvested in large quantities it sells readily. But every one who will begin the production of this article will have the same objections to overcome, in his surroundings.

There is another danger in the production of extracted honey, and that is the harvesting and selling of an unripe article. When the honey-extractor was first discovered it seemed as if all that had to be done was to make the rounds of the apiary every other day and remove the surplus. By such a method a very large amount of nectar was harvested, but it was soon ascertained that this nectar was unfit for keeping. The only method by which we can make sure of a good article is the method of leaving the honey on the hive long enough to ripen it partly, at least. Honey harvested a little too soon may be bettered by keeping it for the rest of summer in a hot place where it will have a chance to evaporate its extra moisture, but it is preferable to leave this work to the bees as long as possible. In dry, hot seasons, a fair result may be expected by artificial ripening, but in cool climates or wet honey seasons it is difficult, if not impossible, to obtain any results that prove entirely satisfactory.

There is however a difference not only in the atmospheric conditions but also in the kinds of honey. Some grades of honey ripen readily, and rarely seem to be overloaded with moisture. In this vicinity, I will refer to Spanish-needle honey, which seems to be fully ripened almost as soon as it is taken in by the bees; while basswood honey, though harvested in the hottest weather and kept through August and September, very often proves too thin for regular granulation. When honey is insufficiently ripened it is in danger of fermentation, which more or less damages its flavor. It does not granulate evenly, hardening in lumps that become surrounded by the more liquid portion of the nectar. Although in this shape it may be very palatable and desirable for prompt use, such honey will not safely pass through the following summer.

One of the oldest and most practical bee-keepers of America, L. C. Root, son-in-law of Mr. Quinby, was the first bee-keeper, to my knowledge, who attracted our attention to the fact that ripe honey was slow to granulate, and that the grades that granulated latest in the season and with the finest grain were the best for keeping. This has proven correct. When our crop of clover honey hardens in a regular mass, resembling butter in texture, with no liquid portion separated from it, we may be sure that the honey is well ripened and safe to preserve, if not exposed to moisture later. But when the grains are coarse, resembling lumps of sugar, with more or less liquid surrounding them, we have a honey that although good for present consumption will not be likely to stand the changes of temperature without danger of fermentation. Hancock Co., Ill.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

WOMAN—HER POSITION AND WAYS.

I note with considerable interest, perhaps with a little surprise also, what Mr. Roe says on page 267. Of course, it is a matter of some importance to decide what is a proper subject for playful sport, and what is too sacred for any such treatment. All malignity being barred of course, must Woman in all her moods and tenses—and duds—be forever exempt? I think that only a small minority of intelligent women, such as read bee-papers, will support Mr. Roe's complaints. If a majority of them honestly object, I shall think it time to consider the subject of reforming my style. His largest error is in feeling (I say *feeling*, not thinking) as if the position of Woman, as a prime factor of Civilization and Faith, is something less than rooted and grounded like the everlasting hills. Practically all good men confess the like of that, Mr. Roe, so don't be nervous. If I shoot a pea at Mt. St. Helens, by blowing it through a tube, Mt. St. Helens isn't going to suffer any serious damage. Even its reputation as the most saint-like mountain in the world is going to be pretty much the same after I shot the pea as before. Most people (seems to me) take this into consideration to start with, and therefore do not object to my shooting the peas—would rather I'd shoot 'em than not.

Mr. Roe rather makes another mistake in thinking that my personal and inner spirit is one of contempt or indifference. I hardly need (I think) to be reminded that I had a mother, and a baby sister, whose early death powerfully influenced my whole life, and "another, not a sister," who died 18 years ago. For that 18 years I have not once even seen in print that name, which is not written here on this page, without more or less of a thrill. If you don't look out, Mr. Roe, I shall be hauling you up before the bar charged with cruelty.

Mrs. H.'s costume was pretty. Bridal costumes are apt to be pretty—also preposterous. We might consent that a dress to be worn only once in a lifetime might be preposterous were not the "critters" so much inclined to have all their other costumes preposterous, too. Just think once what feminine costumes might get to be if not redeemed by the saving grace of brotherly criticism.

PACKING-CASES FOR BEES.

How many are the styles that even so simple a thing as a packing-case is capable of! Not long ago we had one designed to go through winter without any packing. Now we have one to be left out all summer after packing is taken out. This one also is made to move at two lifts, by ripping the lower 12 inches separate. Nice to obviate the need of a hive-cover—providing, that is, that the tar-paper continues impervious all summer. A. J. Kilgore, page 183.

THE BEE-KEEPER WHO WRONGFULLY CROWDS.

And so to mitigate our absolute nothing but talk, we have one State society that will not take as a member a bee-keeper who wrongfully crowds upon a previous apiary. Not bad for a beginning at discipline—and let Idaho have the honor due. Page 196.

"CONSECUTIVE POLYGMAY."

Sorry to see "consecutive polygamy" getting started among our bee-editors. Willing to hope that there may be mitigating considerations in the case not visible to a casual glance. Page 196.

"The Hum of the Bees in the Apple-Tree Bloom" is the name of the finest bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us *one new* yearly subscription to the American Bee Journal at $1.00.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Replacing Lost Colonies of Bees.

Dear Miss Wilson :—What would you do if you had lost all of your bees excepting 2 colonies (saved 2 out of 12), and wanted to increase them as rapidly as possible, rearing your own queens ?

This has been the coldest winter on record in Connecticut, and almost everybody has lost half, if not all, of their bees, in this part of the State. I enclose a clipping from the Danbury News, written by Mr. H. L. Jeffrey.

The 2 colonies I have left have queens from Dr. Miller's stock. Why they did not die I can not tell, as they were packed exactly the same.

I enjoy the Sisters' column very much, and find it very helpful. Florence W. Sagendorf.

Fairfield Co., Conn., March 25.

Just what would be the best way for *you* may not be easily told. In the first place, I should read up all the literature on hand pertaining to the subject in books and bee-papers, and then try to decide which plan I could work best. In Dr. Miller's "Forty Years Among the Bees" you will find some practical instruction on the subject, pages 252-261.

In any case, the first thing is to let the colonies become strong. Nothing will be gained, and something may be lost, by attempting division too early. Here is one plan you may follow :

If there is a difference in queens, suppose No. 1 has the best queen. When both colonies are fairly strong, each having five or six frames of brood, take from No. 2 one or two frames of the ripest brood and exchange with No. 1 for frames with younger brood, or perhaps with little or no brood. Perhaps a week later the same thing may be repeated. Thus No. 1 will be likely to swarm earlier. When it swarms, hive the swarm on a new stand. A week later divide the old colony into nuclei, giving each nucleus two frames of brood with adhering bees, leaving on the old stand only one frame of brood, as it will have the lion's share of bees. See that each nucleus has one or more queen-cells located where they will be sure to be kept warm.

Perhaps the colony will not swarm, and you must then take matters into your own hands. Possibly that may be all the better. You will add brood to No. 1 from No. 2, as before mentioned, but in drawing brood never leave less than four frames of brood in the one you draw from. Thus you can bring No. 1 up to perhaps 8 or more brood, giving a second story if necessary. When sufficiently strong, with weather and forage favoring, take a frame of brood with adhering bees and the queen, as a nucleus on a stand, of course adding one or two combs with some honey. Eight to ten days later divide the old colony into nuclei, as before mentioned, putting one of the nuclei (this nucleus will need only one frame of brood) in place of the queen, returning the hive with the old queen to the old stand. Draw brood from time to time from No. 2 for No. 1, till No. 1 again becomes very strong, when the process may be repeated. As the season becomes later, make your nuclei stronger, perhaps helping from the earlier nuclei, and be sure not to be caught with a lot of weaklings at the close of the season.

The clipping referred to in the letter above, reads as follows, being dated March 24 :

> According to Henry Jeffrey, expert in bee-culture of Litchfield County, fully 80 percent, and perhaps more, of the honey-bees in this section are dead, having starved, the honey on which they would naturally feed having been solidly frozen during the continuous cold weather of January and February, when the thermometer on 33 mornings was below zero, and on two mornings 40 below, as against only three days below zero in all the winter before.
>
> Throughout this section there is plenty of snow left yet, having been on the ground continuously for 90 days. No one in this section can recall as severe a winter as the one just passed.

Maple Sugar and the Sugar Bush, by Prof. A. J. Cook ; 44 pages ; price, postpaid, 30 cents. This is by the same author as "The Bee-Keepers' Guide," and is most valuable to all who are interested in the product of our sugar-maples. No one who makes maple sugar or syrup should be without it. Order from the office of the American Bee Journal.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Queen-Cell Among Drone-Brood.

In overhauling a friend's bees to-day, I had a new experience. I found a colony that was queenless (at least no queen was noticed), and no brood was found in any of the combs, excepting a small quantity of drone-brood sealed up. Ninety-six drone-cells, actual count, and 1 sealed queen-cell, no worker-brood at all. The queen-cell was right among the sealed drone-cells.

1. Now, where did those drone-cells come from?

2. Is it possible that a laying worker deposited those eggs in the drone-cells, and the bees realizing their queenlessness endeavored to rear a queen out of a drone-egg?

3. Is this a very common occurrence, i. e., to find queen-cells started among drone-comb ? Virginia.

Answers.—1 and 2. It is not only possible but probable that not only a laying worker but a number of them were present, and that the bees attempted to rear a queen just as you have suggested.

3. It may be expected wherever laying workers are present.

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Rendering Combs in a Sun Wax-Extractor.

1. I am going to have a sun wax-extractor. Please tell me how to use it.

2. I have some drone-brood combs; they are new combs left from last year in which the bees died Part of the combs are filled with dead bees and honey. Can I put them in the extractor?

3. Is it good to put water in the pan for the settlings?

4. If the comb is put through the sun extractor once, and not clean, can it be put through again? Iowa.

Answers.—1. You will probably get instructions with the extractor, although the working hardly needs instruction. Simply place the extractor in a sunny place facing south, and if you want to hurry up the melting turn it at different times to face the sun.

2. Yes, but it will be better without the dead bees. Perhaps if well dried you can shake them out; especially as worker-bees fit rather loosely in drone-combs.

3. Yes.

4. Yes, but if you put in old combs you can't get the wax out clean without some kind of a press. If old comb is broken up fine and thoroughly soaked with water, you will get more wax out of it; for the cocoons soak up the wax something like a sponge. If old comb is put in whole, have only one layer at a time.

◆

Superseding and Introducing Queens—Queen-Clipping Device.

1. Kindly "diagnose" this condition of bee-hive abnormality if it is abnormal at all: Four days ago I opened my best colony and used smoke to quiet the bees. I used a smoker that a neighbor burnt brimstone in last fall and which still, though cleaned well, retains the odor of brimstone. Fuel used was rotten wood. On opening the hive I found the bees balling the queen. I closed it rapidly. To-day—four days afterward—I find two queen-cells started. There is an abundance of brood, and the hive is boiling over with bees. I have used stimulative feeding, two or three times. There are to my mind two hypotheses: Either the bees and queen became unduly excited, or the bees were about superseding the queen. I call you into consultation in the case.

2. I have taken from my cellar in fine shape 53 colonies. There are only two queens dead. I have just sent South for two queens. Now, I have 2 observatory hives. How would it be to introduce each queen into an observatory hive, and in a few days, if well received, introduce the comb from the observatory hive into the queenless colony? I do not suppose there would be any trouble about introducing, but it seems this plan would make assurance doubly sure.

3. I still have quite a little difficulty in finding the queen. Is it better to wait for a hot day when most bees are on the wing?

4. Do you recommend any queen-clipping device that could be used to slip down on the queen and hold her on the combs whilst clipping? Iowa.

Answers.—1. It does not often happen that a queen is superseded early in the season in a colony well stocked with bees and brood; and if she is superseded, she will continue laying until the young queen emerges, or longer. You can decide by examining the queen-cells. If it was a case of superseding, you will find pre-constructed cells; that is, the bottom of the cell will be greater in diameter than a worker-cell. If you find a worker-cell at the bottom of the queen-cell, then it is a post-constructed or emergency cell, and you may know that the cell was built because the queen was dead, or because they were afraid she would be. It is not an unusual thing for a queen to be balled when the bees are disturbed, especially in spring, perhaps for her safety, and as soon as the excitement is over the queen is released, yet in their eagerness to protect the queen they may carry the thing too far, causing her death. Cells may be started when the queen is first balled, and then when she is released they may or may not be torn down. It is possible that the queen was alive and well, unless you saw her dead body. Of course you can decide easily by this time, as there will be eggs if the queen is all right.

2. Your plan will tend to greater assurance of safety.

3. Yes, it will be easier for you and safer for the queen. Don't fool with bees when they are not flying freely, anyway.

4. That depends. One who has been in the habit of catching the queen, after clipping hundreds, would hardly be bothered with anything of the kind, but it might be quite a help to many who have not had such experience.

Fastening Comb Foundation in Sections.

In reading your book, "Forty Years Among the Bees," I have come to the conclusion that you can put foundation in sections better than I can. I am a beginner, and fastening foundation in the sections bothers me more than anything else. I use the Daisy foundation fastener, and do the best I can, and carry the supers from the shop to the hives as though I had soap-bubbles, the foundation in some of them will come out. The 4¼x4¼ sections are not as bad about it as the 4x5. If you will tell me how to put foundation in sections so I can put the supers in a wagon and drive to an out-apiary, it will be a great help to me. OHIO.

ANSWERS.—When you vigorously shake a super of sections, the foundation should be so well fastened that none drops out. It is possible that you don't have enough heat. Turn up your lamp so that the plate will be so hot that the wax will begin to melt as quickly as it touches. Of course you must move rather lively or more will be melted than you desire. If the starter is of large size it will be necessary to hold it after taking it from the machine just a very short time before turning it over, thus giving it chance to cool a little.

Getting Combs Built to the Bottom-Bars—Wintering Bees.

I have been keeping bees for 3 years, and have 15 colonies. I had 20 last fall, and lost 4. One was too light, and 1 queenless, so I united them. I hunted all my bees the first year, 7 swarms, and that was late (July 26), but they wintered well. I want to go right on and run for comb honey.

1. As I cut out all the crooked and drone comb, I saw all the combs are about 1 inch from the bottom-bar. I am thinking of tipping the hive upside down when in the best comb-building. Will that work? Will it make any difference if the honey is down and the brood up for 3 or 4 days? I think they will fasten it on, and then I would turn it over again.

2. Would it be better to winter bees outside, or in a cellar where I can't get the temperature over 33 degrees, and sometimes less than 31? WISCONSIN.

ANSWERS.—1. Yes, if you reverse the frames when bees are eagerly building comb, they will build to the bottom-bars, and there will be no trouble from having cells wrong side up for a few days.

2. It will probably be better to have them well packed outdoors than in a cellar never warmer than 33 degrees, unless you take them out every time it is warm enough for them to fly.

Early-Reared Queens—Laying Workers.

Last fall I had 5 colonies of bees when winter commenced, but soon two of them died, which must have been queenless. One of the 3 that was left I wintered outside, but wrapped it up good, and put it in a warm place. The winter has been mild here, and this colony wintered all right. The other 2 colonies I put into the cave; it was cold in there, but not as cold as it was outdoors. I put them in about Dec. 1, and they did not have a flight until March 1. At first I did not give them enough air above, and they got damp and wet. When I took them out there was a lot of dead bees and mold on the bottom-board. I cleaned them all off, and the colony seemed to be weak and queenless. After a flight, I put them back until about March 17, then set them on the summer stands. I could not find a queen in one hive, while in the other the queen had gone to laying. I found one piece of comb with a few eggs and some larvæ. I took this and gave it to the queenless colony. I tried to start a queen-cell or two by enlarging every other cell, but the bees did not care about my help. As soon as I gave them this comb they set up a hum such as I had not heard in 4 or 5 days. I looked at this comb and they had sealed all that was ready to seal, and had started 2 queen-cells; one had a larva in, but the other had nothing. All the rest of the eggs were gone, no sign of them left. and the bees had straightened up the cell that I had spoiled.

1. Will they rear themselves a good queen out of this? All the eggs were in worker-cells.

2. Will this queen be good, as there are no drones, and will not be for quite a while?

3. How can I save these bees? I have been thinking of giving them a frame of brood, now and then, from the other hives, as they increased. How would this do?

4. Will this queen lay before she mates with the drone? If she does, will her eggs hatch? If so, will they be drones, if laid in worker and queen cells.

5. How can she lay eggs, and what power have they to hatch? (Great is the mystery of bees!) I have read a small A B C book on bees, and Dr. Miller's "Forty Years Among the Bees," and yet this worker-laying business is a conundrum to me. I also read the American Bee Journal, but this is one thing I cannot see into, and feeding the queen-egg royal jelly—where do they get that? They cannot get anything excepting what is inside of the hive. NEBRASKA.

ANSWERS.—1 and 2. Queens reared unusually early are not likely to be good, and the case will not be helped by the absence of drones.

3. By giving them sealed brood from time to time from other colonies you can build up this colony to be the strongest in the lot, and have them rear a good queen later on. But that will cost more than it will come to, for the gain to this colony will not balance the loss to the others. You will be the gainer in the long run if you will unite the queenless colony with another having a good queen, or perhaps dividing its forces between two or more colonies. Then when all become strong you can have a new colony or colonies, and have more bees by the middle of June than if you had tried to keep the queenless colony going.

4. She may or she may not lay before being fecundated; and if she does, all her eggs will produce drones even if laid in worker or queen cells.

5. A worker-bee is a female, but with reproductive organs not fully developed. Under certain circumstances not merely one worker but a large number of them will take up the egg-laying business; and there is no reason why the eggs should not hatch just as well as the unfertilized eggs of a queen, for the queen's eggs that produce drones are all unfertilized. The nurse-bees produce the royal jelly just as they produce the food for the worker-babies (the royal jelly is about the same thing as the food fed to the youngest workers or drone-larvæ), by eating what they find in the hive—honey and bee-bread. You don't understand all about it—neither do I; I'm glad to learn what little I can, even if I don't fully understand it.

Spacing Extracting-Frames—Plain Zinc Excluders—Porticoes on Hives.

1. During rainy weather I nailed up a lot of shallow extracting-frames, but when it came to spacing I stopped. The top-bars of these frames are ⅞ of an inch wide. If I space them with staples I believe those staples will always be in the way in the extractor. What is the quickest way to space such frames, when placing supers on the hives, and how far apart from center to center?

2. From reading, I see there must be queen-excluders of zinc in using extracting-supers. Is there room enough for the bees to crawl through if I lay the perforated sheet directly on top of the frames? or would it be better to lay ¼-inch slats across the frames, and the sheet on these?

3. Of what use is the portico on some styles of hives? IOWA.

ANSWERS.—1. With top-bars and end-bars only ⅞ wide, any spacer would likely be a good deal in the way when extracting, so loose-hanging frames may be the best thing under the circumstances. The quickest way to space will probably be by eye and finger. Practice will help greatly. While pushing each frame up to place it will help to let a finger be between this frame and the preceding frame; but if your eye is well trained you may not need the help of the finger. Extracting frames may be spaced anywhere from 1⅜ to 2 inches, although few would favor as much as 2 inches. Of course there should be uniformity in spacing.

2. Yes, there will be plenty of room for the bees to pass through if the sheet be laid directly on the top-bars.

3. It is supposed to protect from the wind any bees inclined to take a promenade on the alighting-board. It also furnishes a nice protection for spiders, and is not much used nowadays.

Queen-Cell Cups—T Supers.

1. Are there queen-cell cups for sale in the market? Mr. W. H. Pridgen said, in 1900, that the time is at hand when cell-cups will be on the market; but I have never seen them advertised. Do you use them? If so, are they a success? Would not old queen-cells do to breed in again if larvæ and royal jelly were transferred into them? I would like to use cell-cups, but fear I have not ingenuity to make them.

2. I can't imagine what kind of T supers you use. You say in the Chicago-Northwestern convention report that it is in four pieces, and if you are not careful you will have those four pieces scattered around, etc. Now, I have been using T supers for years, and would not exchange them for any supers I ever saw. And as for the slotted section-holders, I would not have them as a gift. Mine are of a style made up by Elvin Armstrong. They were praised at the time, but he went out of the supply business years ago, and I have never seen any representation by any of the factories. The T's are supported by a strip at the bottom, and when the sections are on they can not get out of place. Then when the sections are all in I put a set of T's on top, and when they are all fastened in I could throw them over a fence and they would not come apart. If I had a starter on either side of the section I could put the super on either side. I could not get them made to order until I sent a sample to the factory. I think if you had them you would be satisfied with them. IOWA.

ANSWERS.—1. I don't know whether you can get cell-cups from dealers or not. I think they are not quoted in the catalogs. One year I bought quite a number from W. H. Pridgen. They are a success, but where one is rearing queens merely for his own use, it is as well, or better, to let the bees start their own cell-cups, as described in

"Forty Years Among the Bees," page 240. Yes, you can use the old queen-cells.

2. You can "imagine" my T supers "in four pieces" all right if you will call the super itself one piece and the T tins three more pieces, thus making four pieces. In other words, they are just about the same as yours, only instead of a single piece nailed on each side of the super to support the T tins, as you seem to have, the usual way is to have three small pieces on each side, one for each T tin. Instead of putting T tins on top, I put little pine sticks ¼ inch by ⅛ or a little less than ⅛. You might like this last better than T tins, as the tins probably cause more bee-glue on top. I don't understand how you could turn your super upside down without the sections falling out, as the T tins on top are probably not fastened there.

I am a little surprised at your not being able to get T supers, for they have been quoted in catalogs for years, and one leading catalog before me says: "This form of super is very popular with a large class of bee-keepers, and it is also used by some of the most extensive honey-producers in the world." I do not wonder at your preference for T supers over all others. Almost any one would prefer them *if he would learn to use them properly*.

If you read anything in the report that made you think I was not satisfied with the T super, it must be that I was wrongly reported, or expressed myself wrongly.

◆

Learning Queen-Rearing—Growing Basswood and Buckwheat.

1. Can a person learn queen-rearing from reading "Forty Years Among the Bees?" If so, in what particular does your method differ from that of Mr. Doolittle?

2. The writer had a prolific queen last season—she filled 12 Langstroth frames with brood, and her bees were golden Italians, but some time during August the color of many of the bees were very dark, and when the hive was opened a black queen was found, the old one having been superseded. Do bees sometimes destroy a valuable queen?

3. An Italian queen mates with a black drone, and the bees from her are more vicious than either pure black or pure Italians. Why?

4. How do bees take feed from the Doolittle division-board feeder?

5. If a colony has plenty of stores in the spring, will the uncapping of the honey cause them to increase the same as if they are fed sugar syrup?

6. Do you think basswood would be suitable to this climate?

7. If one should get basswood sprouts and set them out, provided they will live here, how long will they grow before they yield honey?

8. I have sown buckwheat, but have never been able to find any honey that the bees collected from it. The bees work on it only from about sunrise until the dew is off. Please tell me how to produce buckwheat honey. KENTUCKY.

ANSWERS.—1. Yes, you can learn from "Forty Years Among the Bees" the way I rear queens; but if you want a book entirely devoted to that subject get Doolittle's "Scientific Queen-Rearing." It is the most comprehensive work on that subject that has ever been written. The difference between Mr. Doolittle's queen-rearing and mine is not in principles but rather in details, to give all of which would transgress the limit here allowed.

2. Yes, often. In the natural course of events, *every* queen is sooner or later superseded, no matter how worthless nor how valuable.

3. I don't know.

4. There is an opening at the upper part where they enter and readily crawl down to the feed. They would drown there in large numbers if it were not for the fact that a wall on either side is so close that they can easily crawl up.

5. It will have much the same effect.

6. Most likely.

7. Possibly 8 or 10 years.

8. I don't know of any other way to make buckwheat honey except to have the plants in plenty and let the bees work on it. You do not say how large a surface you sowed. A very small patch would hardly be a fair test. In the best buckwheat regions bees do not work on buckwheat late in the day, usually closing up some time in the forenoon.

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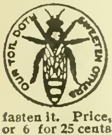
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FROM MANY FIELDS

Wintered Well.

My bees have wintered well so far. They are lying out at the entrance. I winter my bees on the summer stands. When I feed them I invert a bottle with feed in it, and a rag over the mouth of the bottle. In bad weather I nail a wire over the hive-entrance, so they can not come out. The bees are carrying in bee-bread now.

JAMES L. A. MILLER.
Gasconade Co., Mo., March 24.

Honey Season Too Long.

I had my first swarm to-day. I have 60 colonies. Last year I got 1800 pounds of honey from 45 colonies, although it was a bad year. It rained 14 days in May right in the middle of the honey-season. One drawback to honey-producing here is that our nectar-yielding flowers bloom from January to November, making the season too long.

S. B. SINGLETARY.
Thomas Co., Ga., March 15.

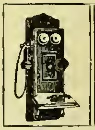
Severe Winter and Loss of Bees.

This is the 4th year and I have not lost any bees in wintering until this year. I lost 24 colonies out of 39, all wintered on the summer stands. The most of them were packed top and sides, but it did not make any difference how they were protected. The warmer they were, the more they sweat. The single-walled hives had more chance to dry out and the bees in them came through better. I have gone to three other bee-men, and they have all had the same bad luck this winter. This is the coldest winter we have had for 20 years—22 below, and steady cold.

WM. M. SCARDEFIELD.
Union Co., N. J., March 18.

Honey Crop Prospects.

The prospects for a honey-crop the coming season are very much improved, so far as the Ojai Valley is concerned. Our rains which were due in November, did not arrive until the middle of January, and at that date the outlook was dark, but of late we have had



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some very fine rains, coming in a way to do the most good, and followed by good weather conditions. If we get a few more showers during the next 30 days, and other conditions are favorable, we may yet "pull off" a fairly good crop of honey. Bees are in fine shape, much better than at this time last year; breeding up fast, and in some cases actually putting new honey into the extracting-supers. Could we foretell what kind of weather we will have during the next few weeks, we might make a guess at the outlook for a crop. Probably it is better that we can not tell; so we will wait and do our part in getting ready for a busy season. Wm. Ross.

Ventura Co., Calif., March 23.

Severe Winter on Bees.

This winter has been very severe on bees in this locality. I have received accurate information from bee-keepers for several miles around, and also from Iroquois County, and all reports are about the same. Judging from the reports, fully 50 percent of all the bees around here are dead, not figuring on what will die between now and blossoms. It is true that all the bees were wintered on the summer stands, but some were well protected. They starved with plenty of stores, and to spare, but the cold spell was longer than they could stand, hence the results. However, with 50 percent left, and prospects for good pasturage, I see no reason why bee-keepers can not make it well, as there is no doubt but that honey will sell at a good price.

I seem to have been more fortunate than some of my friends, as I have lost, as yet, only 7 colonies, and the others seem to be fairly strong. H. S. Duby.

Kankakee Co., Ill., March 21.

Long Winter Confinement.

On page 151, Dr. Miller asks if any one ever had a colony of bees come through in good condition, out-of-doors, after a confinement to the hive of 100 days, without a cleansing flight. I have had seven years' experience in outdoor wintering here in Northern Wisconsin, and am able to give an answer to his question. Indoor wintering is preferable here, because the thermometer sometimes goes down to 30 degrees below zero; but if the bees are properly packed they will endure confinement to the hive of over 100 days very well. That, at least, has been my experience. I made a good bee-cellar and wintered my bees in this cellar until 1896, when I read in a paper that outdoor wintered bees are more hardy in the spring than those wintered in the cellar. I decided to give outdoor wintering a trial. In the fall I packed three colonies of bees in a winter-case, with about 4-inches of chaff around the hives and on top of them. They had no flight from December 12 until March 18, so they were confined 95 days. They all came through the winter, but in a very poor condition.

In 1897 I again packed my three colonies in the same way as the winter before. They were confined from November 16 to February 9, or 84 days. One colony was dead, and the other two very weak.

In 1898 I packed 10 colonies, but this time I put a chaff cushion on each side of the bees, inside the hive, and a Hill's device on top of the frames, over which a piece of burlap was spread. Now I put a super filled with chaff on the hive. I put a cover over the super, but left an open space of about ½ inch at the rear end of the super. I then placed each hive in a winter-case, and packed them with 3 inches of chaff on the sides and top, and put a water-proof cover on the case. This time the bees were confined from November 22 to February 17, or 86 days. They all came through the winter in fine condition.

In 1899 I again wintered 10 colonies, packed the same way. They were confined from December 3 to March 31, or 117 days, and all came through strong and healthy, except one colony that had a drone-laying queen. This one had dysentery in the spring and died.

In 1900 I packed 18 colonies as before. They were confined from November 14 to March 17, or 122 days. Two colonies were dead, but the other 16 colonies were in good condition, without any sign of dysentery.

In 1901 I wintered 18 colonies outdoors.

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They were confined from November 12 to February 23, or 102 days. All came through with no signs of dysentery.

In 1902 I wintered 24 colonies outdoors. They were confined from November 27 to February 10, or 74 days. There were some dysentery spots on the alighting boards, but all came through.

In 1903 I wintered 26 colonies outdoors. They were confined from November 12 until yesterday, or 105 days of very severe weather, with the thermometer most of the time around zero, and some of the time 30 degrees below. One colony is dead, 3 are showing signs of dysentery, and the other 22 colonies are in good condition. The three colonies affected with dysentery had a good flight, and I hope they will pull through. I have 61 colonies in the cellar, and there is no signs of dysentery on the hives up to date. Taking everything into consideration, I prefer cellar-wintering in a severe winter.

John H. Clasen.

Manitowoc Co., Wis., Feb. 29.

Bees Not Wintering Well.

Bees are not wintering well so far. Some have lost all, some half, some none at all. One man who had 47 colonies has lost 25 so far. They were left on the summer stands, in single-walled hives. Some colonies had as high as 35 pounds of honey left. They must have chilled so that they could not reach their stores.

I have a few colonies, and they are well packed and all right so far. In this locality there was no fall honey to speak of, which necessitated feeding, and those who are not "onto their job" will lose heavily from the extreme cold and scarcity of food. My bees had their last flight on October 24, and their first flight this spring on March 7, and, in fact, that is the only flight they have had. My neighbor put 11 colonies in the cellar last fall, and by the first of February he had lost 7. The combs were all moldy and damp. He put the live ones in his chamber and is now feeding them. When it is warm, and the sun shines, they come out of the hive and fly to the food and fill themselves, and then go back. This room has two windows in the south, and the hives set with the backs to the partition, and face the south. Two of the 4 colonies are queenless, and they do not work. He feeds syrup in combs from which the honey has been extracted. It is quite a sight to open the door on a warm day and see them work, which they do quite lively.

Peter L. Francisco.

Marathon Co., Wis., March 18.

Outdoor Wintering of Bees.

Complying with Dr. Miller's request, pages 151 and 152, I will relate my experiences as to wintering bees out-of-doors. I must qualify this by stating that my bees were wintered in an open shed, facing the northeast, without any protection from that direction.

In April, 1880, I commenced with two colonies of hybrids, which I increased to 8 during the first season. Toward the end of the season I became aware that I had overdone the increasing business, but it was too late for me to correct the blunder, since I had not yet learned how to unite weak colonies quickly and successfully. I did not take a pound of honey away from them, but, instead, I fed cane-sugar syrup until the weakest colony had all of 15 pounds of winter stores, while the strongest colony had 30 pounds or over.

All the hives were hand-made by myself, and of 8-frame capacity (American frames, 11½x11½), but single-walled. A super 6½ inches deep was left on the hive, which was well packed with absorbents. Three cross-pieces were placed on the brood-frames, to allow the bees to pass from one comb to another, over which a clean sheet of burlap was spread. Next was spread a heavy woolen quilt, and then a bag of oats-chaff completed the packing for the winter. The telescoped covers were provided with 4-inch holes (screened), so as to permit accumulating moisture to escape. Thus prepared, my bees remained without a single flight from Nov. 15, 1880, until March 1, 1881—fully 106 days. Four colonies showed more or less dysentery,

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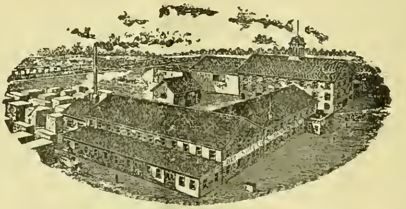

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51 WALNUT STREET. CINCINNATI, OHIO.

and spotted the front of their hives, so I transferred them into clean, new hives, March 22. Two, mere nuclei, spring dwindled and soon succumbed, having too few bees. But the 6 colonies soon made good headway.

I very soon learned that for the production of extracted honey, for this locality, a much larger hive, and double-walled at that, is much to be preferred to small, single-walled hives. While I still have a number of small pioneer hives, I have placed them in the upper tier in my bee-shed, and use them exclusively for the rearing of queens. All of my regular hives carry 14 combs, 11¼x11¼, and 2 division-boards in the brood-chamber, and all are double-walled. The bees have always wintered in them to my perfect satisfaction. I hardly ever move a hive, and the queens are always kept in the same hive and location, as long as they are in good service.

Before concluding I will say that the winter of 1880–81 was an exceptionally cold one, and that deep snow covered the ground from the middle of November, 1880, until the middle of March, 1881. During that winter the thermometer frequently went away below 30 degrees below zero, and once as low as 40 degrees below. In fact, that winter was the coldest of any winter during the 24 years that I have kept bees. Wm. Stolley.

Hall Co., Nebr., Feb. 27.

A Queen Mated but Once.

On page 151, I see the question, "Are queens fertilized more than once?" From observations during all my experience with bees, I can say that there is no such thing. It is against nature. If a queen does not fulfill her duty, she will soon be superseded without notice. I remember reading an article in the Bee Journal last year, where a bee-keeper positively saw a queen come home twice, and both times successfully mated. Under no conditions is this possible. In the first place, a queen is not in a hurry to go out. Often she has to be driven out by the other bees. She will come out into one corner of the hive and then slip back into the other, until she is forced to go. She takes the location of the hive and starts off singly to take a flight, when she is met by a drone, when a chase begins. She will try her best to get away if possible, but a drone can out-fly a queen every time, and as soon as she is caught they naturally fall to the ground. I have seen them struggle for 10 minutes before the queen would give up. I can tell that gentleman how he saw his queen successfully mated twice. When a prime swarm issues there are two or three queens ready to come out. While it is not always the case, it often happens. As soon as the old queen leaves, one of the new queens will take possession, and when she flies out to be mated, one of the other queens will slip out and also take possession, and when the first one comes back all worn out from her flight, what does she find but that some one else has taken her place, and a fight is sure to follow, and she being worn out, is sure to be killed, and so the next one will have to take her flight? Of course that would cause a man to believe that one queen was mated twice. If he had looked in front of the hive he surely would have found the dead queen.

I would like to hear from Dr. C. C. Miller, and others, on this subject.

LaSalle Co., Ill. P. H. Harbeck.

Results of the Winter—Hives.

I must tell the good news that I have not lost a colony of bees during the past winter. This is my second winter with bees. Last year I lost one colony of my five, and this year all my 11 colonies are alive, although 2 of them are somewhat weak. These 2 I shall double up with some strong colony and keep the best queen. There seems to be little honey left in the brood-chambers. All my bees are in Danzenbaker hives. Five colonies I wintered in the open air, protected from the cold wind by a house and fence, besides having an 11-inch telescope cap, with four inches of chaff over the frames. The other 6 I had in a "pit" above ground, covered with dry leaves about a foot deep all around. These 6 I gave a ⅞-inch entrance, but covered with a

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wire-screen to within ¼ inch from the bottom, to prevent mice and rats getting inside. The hives stood on planks raised about a foot from the ground. All the 11 hives had an empty super underneath the single brood-chamber, but I think a double brood-chamber is still better. I shall not put bees in a pit again, as all the colonies lost quite a number of bees during the winter—about a pint each, or perhaps a pint and a half. Those wintered outdoors did not lose quite so many.

The date of the last flight of my bees last fall was the day before Thanksgiving, while February 6 was the first day they could fly this year, making a continuous confinement lasting 10 weeks.

These last two seasons with my bees I always had to feed in the fall, and used sugar syrup therefor. But this year I am going to take off all sections, except the unfinished ones by the first of September, and then let the bees fill their brood-chambers full during the following two months, so that they will have plenty of good stores for the winter. Some say that sugar syrup is as good as, if not better than, honey for the bees, but I doubt it very much. If honey contains so much more nourishment, and is so much more healthful than sugar for man, why is it not so for the bees? I think, especially when rearing brood in the spring, if bees can use honey in preparing the larval food, the resulting young bees will be much stronger and healthier.

By the way, I have been investigating Massie's Ideal 20th Century hive lately, and I have been favorably impressed with it, and shall certainly give it a trial the coming season. I use the Danzenbaker hive, and like it very well excepting a few things. First, hanging brood-frames in the center prevents one from hanging a single frame by itself; if done, it will whirl bottom side up quick as a flash, angering the bees. Second, the section-holders, with side pieces, are no end of bother. Either the sections are too tight and you have to wedge them in by sheer force, which results in their being squeezed into diamond-shape, or they are so loose as to fall out. I have found this is caused by not all sections being of exactly the same thickness. The third disadvantage of the Danzenbaker hive is its cover. Both last year's covers and the one of the year before are good only for kindling wood. Last summer I bought 20 air-space, paper-covered covers, but find that they warp at the sides, leaving sometimes as much as ¼-inch space. All these disadvantages are done away with in the Massie hive. Still, one never knows how a thing will turn out until he has given it a practical trial.

I find the American Bee Journal very interesting, especially the convention reports.

CHARLES B. ACHARD.

Dupage Co., Ill., March 24.

Bees Wintered Well.

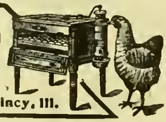
My bees all wintered well. They have plenty of storea. The strong colonies have been at work bringing in stores for the past two weeks. Peaches, plums and cherries are just beginning to bloom. J. W. SMITH.

Dade Co., Mo., March 19.

Selling Adulterated Honey.

The editorial on page 195, giving an experience in locating the author of the item that appeared in the Inter-Ocean, in which it was claimed that comb honey was extensively manufactured and adulterated, fully demonstrates that there is a portion of the consuming public capable of being prejudiced against a pure article, utterly incapable of being counterfeited or adulterated. Now such being the case, what can be the result of the nefarious practice of unscrupulous impostors in adulterating extracted honey, and selling the same for a pure article? Every pound of the adulterated article sold prevents the sales of a like amount of pure honey in the first transaction; but that is the least of the bad effect of such practice, as the purchaser of the adulterated article is likely to become disgusted with it, conclude that he does not like honey, and refuse to purchase any more, although a pure article were offered him. The consumer, who purchases pure honey, soon cultivates a taste for it which no other sweet can replace, with the consequent increased consumption and demand.

I will give my personal observation of some of the sharp practices of unscrupulous persons in imposing bogus honey on consumers in this country. A faker travels from town to town and applies his graft as follows: He purchases a small amount of comb honey in sections, then makes a syrup of a large amount of glucose and a small amount of sugar heated just enough to melt the sugar, and when cool



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The Cyphers Model Incubator.—There is a new star in the incubator firmament, the Model, designed and manufactured by Chas. A. Cyphers, Buffalo, N. Y. Mr. Cyphers is one of the pioneers in artificial incubation, and his book, "Incubation and its Natural Laws," was one of the greatest contributions to the progress of the poultry industry. In this new machine, the Model, Mr. Cyphers has made some notable improvements. Careful investigation has shown that chestnut, which is used in difficult piano construction, is the best wood for holding glue and resisting climatic changes, and this is used for the case, instead of pine. The insulation has received careful attention, and improvements have been made in the compound bar type of regulator, to make it more sensitive and reliable, and easier to adjust. The ventilation embodies a new idea which Mr. Cyphers has worked out by scientific research. The exhaust air from the egg-chamber does not return to the heater and the chamber, but escapes from the machine, so that pure, fresh air only is passed from the heater to the egg-chamber. The air does not exhaust from the egg-chamber through a valve or pipe, but passes slowly through a porous diaphragm, which forms the entire bottom of the incubating chamber. This diaphragm does a great deal more than merely to control the escape of the spent air. It controls and regulates the moisture of the air in the incubating chamber, and in a manner which can best be understood by getting the information first hand from Mr. Cyphers, in his new catalog. Write for it, and mention the American Bee Journal.

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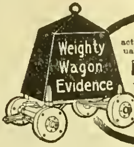

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AUGUST WEISS, Greenville, Wis.

enough that the comb will not melt he crumbles the comb honey into the mixture in fine particles and mixes thoroughly. He then sells this mixture from house to house, as pure honey, and it is no surprise that the purchaser of such an article concludes that he does not like honey. The knowledge of such practice being imposed upon persons not competent to protect themselves against such frauds, demonstrates to my mind that a great amount of good can be done by the honest producers in protecting the innocent buyer, and at the same time increasing the consumption of pure honey. As in the fraud just described, a person familiar with pure honey could not have been deceived, as the very point that effected the sale to the unsophisticated buyer (the small pieces of comb in the mixture) would have appealed to the mind of one familiar with pure honey, as put up by an honest producer, that there was a fraud, without tasting of it, as chunk honey has more than a sprinkle of comb in it, while extracted honey is free from the presence of comb. Now if producers of honey would each personally use their influence to expose all adulterations sold for honey, coming under their notice, not only through the bee-papers, but in local publications, it would serve a double purpose, by educating the consumers to judge of pure honey, and thus prevent their being imposed upon and cheated, and at the same time increase the demand for the purest, best and nearest to nature of all sweets on earth—honey. R. H. BUCHNER.

Jackson Co., Iowa.

CONVENTION NOTICES.

New York.—The annual spring meeting of the Fulton and Montgomery Counties Bee-Keepers' Society will be held in the parlors of the Central Hotel, at Amsterdam, N. Y., Tuesday, May 3, at 10 o'clock a.m.

West Galway, N. Y. T. I. DUGDALE, Sec.

Illinois.—The Galesburg and Knox County Bee-Keepers' Association will hold its spring meeting April 30th, beginning at 9 a.m., at the Court House at Galesburg, Ill. All bee-keepers are cordially invited to attend.

E. D. WOODS, Sec

Take Notice That the New Century Queen-Rearing Co. will have 1000 Queens ready for the mail by April 20. Tested, $1.00; Untested, 75c; 5 for $3.25; 10 for $6.00. Prices on larger quantities and Nuclei given on application. "Prompt service; fair treatment" is our motto.
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Buckbee's New Seed Warehouse.—The accompanying engraving will give our readers a look at the new seed warehouse of H. W. Buckbee, of Rockford Seed Farms, Rockford, Ill. The new building is a four-story stone and brick structure, is modern in architecture, and was planned by Mr. Buckbee, whose experience of over a quarter of a century in the seed-business enabled him so to plan this building that it has been pronounced by many of his friends, as well as competitors, the most complete and modern seed-house in America. The building is located on one of the Rockford Seed Farms. The equipment is simply perfection. Mr. Buckbee has excellent shipping facilities, three railroads passing along two sides of the building. The building is so arranged that the seeds are taken in on the first floor and then carried by elevators to the portions of the building where they belong.

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HONEY AND BEESWAX
MARKET QUOTATIONS

CHICAGO, April 7.—The market is heavily supplied with comb and extracted honey, neither of which are meeting with any demand, especially is this true of the comb. Prices are uncertain, as those having stock are anxious to sell it; therefore it is difficult to quote prices. The best grades of white comb bring 11@12c; anything off from choice to fancy is not wanted. Extracted, white, according to quality, sells at 6@7c; amber, 5@6c. Beeswax, 30@32c.

R. A. BURNETT & CO.

CINCINNATI, O., April 18.—The honey market continues to be dull; if anything, the prices on comb honey are lower; concessions are made on bigger lots. I quote: fancy white comb from 12½@14c. Sales on extracted are made at the following prices: Amber, in barrels, 5¼@5¾c; in cans, ½c more; alfalfa, water-white, 6@6½c; strictly white clover, for extra fancy, 7½@8c. Beeswax, 30c.

C. H. W. WEBER.

PHILADELPHIA, April 18.—Never in the history of the comb honey market has there been such a lot of off-quality of comb honey shipped into this market so late in the season. We have sold some of our own honey in the last few days, good No. 1 as low as 6c a box, the same honey we were getting 14c for 60 days ago. It is the old story that when bee-men find the season is closing and they cannot get shut of the crop themselves, they send it to the commission-men to slaughter it at any price they can get. We quote: No. 1 comb, 10c; amber, 7@8c. Extracted, fancy white, 7½c; amber, 6c. Beeswax sells readily at 31c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

CINCINNATI, April 18.—The honey market here is reassuming activity, and judging from present indications, and the lateness of the season, the last season's crop will be consumed before the arrival of the new. Amber extracted in barrels and cans, 5½@6½c; white clover, 6½@8 cents, according to quality and package. Fancy comb honey sells at 12@15c. Beeswax, 30 cents. THE FRED W. MUTH CO.

ALBANY, N. Y., Mar. 25.—Honey market dull and getting late; demand falling off for comb honey now. So much comb honey is out of condition, being candied hard in the combs makes most unsalable. We quote: 8@12c; nominal now. Extracted, white, 6½@7c; amber, 6@6½c; buckwheat, 5@5½c. Beeswax 28@30c. H. R. WRIGHT.

BOSTON, April 9.—Prices remain same as before, which are as follows: White in glass-front cases at 16c; No. 1, at 15c. Supply is ample, and demand light at this time. Extracted, water-white, 8c; light amber, 7@8c; with but little call for dark Florida.

BLAKE, SCOTT & LEE.

KANSAS CITY, April 18.—The demand for honey is a little better than it has been. Prices on strictly fancy comb are $2.50 per case, if not candied; the great trouble with the majority of honey coming from the West at present is that it is more or less candied, and about $2 00 to $2.25 is all we can get for it; amber is selling at $2.25 per case. Extracted is dull at 5@6c. Beeswax in good demand at 30c.

C. C. CLEMONS & CO.

NEW YORK, April 18.—There are no new features in the honey market. Some white honey is selling at from 12@13c; off grades at from 10@11c, and no demand for dark honey whatever. Market is very quiet on extracted of all grades, and prices are rather irregular. Beeswax very firm at 29@31c.

HILDRETH & SEGELKEN.

SAN FRANCISCO, March 30.—White comb, 1-lb. frames, 11½@12c; amber, 8@10c. Extracted, white, 5¼@5¾c; light amber, 4¼@4½c; amber, 3¾@4¼c; dark amber, 3¼@3¾c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

The market is showing very little life, buyers operating slowly, either for shipment or on local account Such transfers as are effected are at much the same prices as lately current, although the general tone is by no means firm.

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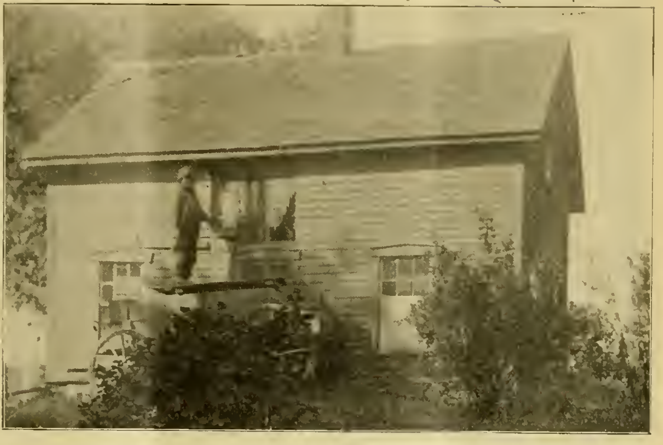


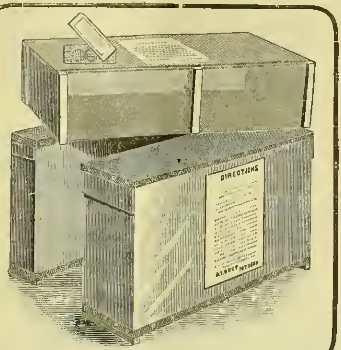
Long Combs in the Side of the House of H. Gilbert, of Jasper Co., Iowa.

(See page 324.)

Apiary of W. J. Forehand, of Lowndes Co., Ala.

Apiary of C. F. Kannenberg, of Cook Co., Ill.

Have You Lost Your Bees?



SHIPPING BOXES FOR BEES.

Save Your Combs.

The winter losses in some parts of the country are heavy, and the demand for bees and queens will be large. Parties needing queens should send their orders at once, and state date when shipment is desired.

Early Italian Queens.

We are fortunate in being able to offer for April and May delivery a large stock of queens from our Southern breeders. While we have a much larger supply than ever before, it is highly important that you send your order at once to secure the queens when desired, as we will fill orders in rotation. We expect to be able to furnish untested queens from our Southern yards, in any number, after April 10th. Send your orders at once.

Prices of pure Italian Queens, untested, from our Southern yard for April and May shipment.

	1	12	50	100
Untested	$ 75	$ 8.50	$35.00	$ 65.00
Select Untested	1.00	11.50	47.50	77.50
Tested	1.50	17.00	70.00	130.00
Select Tested	2.50	28.50	——	——

Prices of Our Red=clover and Honey Queens.

Untested queen	$ 1 00	Select tested queen	$ 3 00
Select untested queen	1 25	Breeding queen	5 00
Tested queen	2 00	Select breeding queens	7 50
Extra select breeding queen, one year old			10 00

We book orders, and fill in rotation.

Imported Italian Queens.

We are prepared to furnish from the best breeders in Italy, imported Italian queens. They are put into our own yards and tested before sending out. We have only two grades—best, and fair imported, and prices are given in the table below.

Best imported queens	$5 00	Fair imported queens	$3 00

The Root Queen-rearing Outfit.

In this outfit are embraced the best points of the best systems in use. It will give satisfaction to the amateur as well as the expert. The cell-cups are made of wood, wax-coated. No melted wax is used in their manipulation, as they are attached to the cell-stick by means of a small nail-point.

The nursery-cage combines the features of nursery and introducing cages. By their use a queen can be released on the candy plan or caged in the hive as desired.

In connection with the outfit goes a booklet on queen-rearing—one which ought to put the veriest amateur on the high road to success. Outfit comprises three cell-bars with 50 waxed wooden cells, one frame of cages (18), one cell-forming stick, set grafting-tools, and a book on queen-rearing.................$4.50

If sent by mail, add 50c for postage.

Tools for Queen-breeders.

Wooden cell-cup with point for attaching to bar, 50c per 100; $4.00 per 1000.

Same, waxed ready for use, 75c per 100; $6.00 per 1000.

Titoff wire nursey-cages, 15c each; $1.35 per 10; $12 50 per 100.

Frame for holding 20 cages, including cages, $3.00.

Cell-stick, 10c each; $1.00 per dozen.

Transferring needle, double-ended and nickel-plated, 15c.

Jelly-spoon, nickel-plated, 15c each.

We can supply, also, fine-pointed lace-scissors with extra large bows, for clumsy fingers, at 35c each.

Nuclei and Colonies of Bees.

We are prepared to furnish one, two, and three-frame nuclei and full colonies of bees in eight-frame Dovetailed hives or Danzenbaker hives. The nuclei are put up in light shipping-boxes made of basswood, the sides of which are only $\frac{3}{16}$ inch thick, and the ends $\frac{1}{2}$ inch. The top and bottom are covered with wire cloth. This makes a very light package, affords plenty of ventilation, and is strong enough to stand shipping 500 to 1000 miles.

Any of our nuclei, even the 1-frame, will make good strong colonies by fall if properly handled. The three-frame if properly managed can be increased four, five, or even ten full colonies by fall if bought now; and instead of having any black bees, one will have in the beginning pure Italians of the choicest stock throughout his apiary.

PRICES OF NUCLEI.

One-frame nucleus without queen	$2 00
Two-frame " " "	3 00
Three-frame " " "	3 50
Full colony in 8-fr Dovetailed hive	7 50

We can furnish with the nuclei any queen mentioned in the table of prices of queens.

One=frame Nucleus--This contains a frame partly filled with brood and bees. The condition of the hives at different seasons f the year vary so that we can not always put up nuclei in the same way; but in every case we aim to give full value. Weight about 7 lbs.

Two-frame Nucleus--This is just the same as our one-frame nucleus, except it has twice the amount of bees or brood, or of both. The box is larger, and holds two frames—one full frame of brood, or two frames partly filled. Shipping weight, about 10 lbs.

Three-frame Nucleus--This is three times the size of the one-frame nucleus, and is made up in the same way as the one and two frame. Shipping weight, about 15 lbs.

A Full Colony will contain 8 Langstroth frames in Dovetailed one-story hive—three full frames of brood, or equivalent, in six combs, and enough bees to cover fairly all the combs. No queen is furnished at the table price. Purchaser is to seclect the queen and add her price to that of the bees. Our colonies are all put up in new Dovetailed or Danzenbaker hives, painted two coats. Shipping weight about 40 lbs.

Special Offer!

Gleanings in Bee Culture one year, and one untested Italian Queen from our Southern yards.......................................**$1.00**

We begin shipping at once. Orders filled in rotation. Do not ask for special arrangements; at this low price we can't make exceptions.

Gleanings in Bee Culture one year, and one untested Red-clover Queen for **$1.50**

We begin shipping these queens about April 15. Orders filled in rotation.

Guarantee.

We agree to deliver queens in good order to any part of the United States or Canada, from April 15 to October. In case of queens valued at $5 or more, we ship in a one-frame nucleus, (no charge for nucleus). If a two-frame or three-frame nucleus is wanted, add to the price of the queen the difference in price between the one-frame and the two or three-frame. Losses must be reported on arrival.

We can make Shipments of Nuclei from

Cincinnati, Ohio, Philadelphia, Pa.,
New York City, Medina, Ohio,
Wharton, Tex., High Hill, Mo.,
St. Paul, Minn., Augusta, Kans.

This will give you very low Express Rates.

THE A. I. ROOT COMPANY,

BRANCHES: **Main Office and Works, Medina, Ohio, U. S. A.** BRANCHES:

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Establisht in 1861
AMERICAN
The Oldest Bee-Paper in America
BEE JOURNAL
Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor. CHICAGO, ILL., MAY 5, 1904. Vol. XLIV—No. 18.

Editorial Comments

"Who is 'Mrs. Berthe?'"

We understand that a woman by the name of "Berthe," of Minnesota, has been appointed superintendent of the apiarian department of the World's Fair at St. Louis. If anybody knows who she is, or what she has ever done in and for the bee-keeping world, we would be pleased to hear about it.

In the meantime we are compelled to let the question stand, "Who is Mrs. Berthe?" The only suitable answer this writer has on hand at present is one that seems to be mortgaged by Dr. Miller, namely, "I don't know!"

Adulterated Honey in California.

Mr. Geo. W. Bercaw, of Orange Co., Calif., sends us the following item taken from the Los Angeles Times of April 20:

> Thirty-five times Inspector Drummond, of the city health department, bought mixtures of glucose and sugar when he assayed to buy extracted honey. While honey is cheap in this most favored of all honey-producing sections of the country, the manufacturers of the adulterated mixture, in which a small quantity of honey was used, must have been able to put it on the market at a much lower price or it would not so commonly be found on the shelves of the retail grocer.
>
> M. W. Worster, salesman for the Southern Syrup Company, was yesterday convicted before Justice Austin of having sold one of the samples taken by the inspector, and was fined $25.
>
> While Mr. Drummond has bought adulterated samples from other manufacturers, he says that most of the dealers are selling the article put on the market by the concern that Worster represents. It is the intention of the health department to keep after those who sell the sham article until it is driven out of the market. Other complaints are expected to follow.

We are glad to know that city health inspectors are getting after the sellers of adulterated food products, especially impure honey. Every such precaution and conviction will help the sale of pure honey, and thus aid bee-keepers. We hope the good work will be kept up until fraudulent foods will be driven entirely out of the markets.

Uncontrollable "Lizzie" and Her "Controllables."

The younger members of the American Bee Journal family will probably not understand the above heading, but the older ones will. Years ago, under the name of "Mrs. Lizzie Cotton," a hive was widely advertised by which wonderful things were claimed to be done, and a good many dollars were harvested for which little returns were secured.

Now appears in the Union Gospel News an article of more than a column advertising the Cotton Controllable Hive, no doubt a free advertisement which the periodical has admitted under the guise of information regarding bees. In addition there is now the "Cotton Improved Bee." The writer of the article is a Boston man, Eben Bumstead, with "Supt." (whatever that may mean) attached to his name, who, last spring, secured a colony of Mrs. Lizzie Cotton's "Improved Bees in a Controllable Hive," and obtained from it 40 pounds of honey, while a city dealer, who had 40 colonies of bees in patented hives, got only 5 pounds to the hive. He does not take pains to mention that hundreds of others obtained two to five times as great yields as his, in hives that were not Cotton hives.

Some of the items make rather amusing reading for bee-keepers. With regard to the fear of stings, "a little experience by being stung and applying salt and water will overcome the fear." "The writer has found the Cotton Improved Bee to be perfectly safe and harmless when rightly managed." But he did not add that all other bees were the same. "However a sting once in a season is a natural remedy for certain ills." That "once in a season" is good.

He gives a description of the Cotton Controllable Hive, which in every particular appeals to the tastes and desires of its tenants: for instance, it has "extra compartments on each side and on roof." The "tastes and desires" of the Cotton Improved Bee must be such that it is just pining to get off in a compartment on the side, and especially "on roof."

The strange thing is that with such superior qualities and such extensive advertising in the past, this hive is not known to the bee-keeping fraternity to be used to-day by a single practical bee-keeper in the country, and the likelinood is that not many would use the hive as a gift. The explanation that these hives are not better known, as Mr. Bumstead gives it, is "because there is no patent on them. The trade must rely upon patented hives on which they can exercise a monopoly, but the Cotton Controllable Hive can be made by any one." If Mr. Bumstead knows anything about the trade, he must know that such a statement is a gigantic falsehood. The great bulk of hives sold by the trade is unpantented and unpatentable. Perhaps not more than one firm in the entire trade has any interest in a patented hive.

Notwithstanding the lack of a patent on this wonderful hive, a little "nigger in the fence" may be seen when Mr. Bumstead suggests "the reader who is interested may write, and we will furnish what information we can without charge."

It is to be hoped that the Union Gospel News will lose no time in cautioning its readers not to lose money by investing in Cotton hives or bees.

Level Head on New Bee-Papers.

Editor Morehouse, of the Rocky Mountain Bee Journal, had this to say in an editorial in reference to starting new bee-papers:

> "The man who starts a bee-journal these days days must be a practical printer, and be able to do most of the mechanical, as well as the mental work himself, or else spend a fair-sized fortune before returns begin to balance expenditures. Even then he must be satisfied with meager profits for a long time to come."

It has been quite a while since we have said anything on this subject. We had about concluded that it is pretty nearly a waste of time and space to say more on new bee-papers. We have seen so many start and stop during the past 20 years that, really, it does seem that any one who thinks he must start a new bee-paper these days has very poor judgment, to say the very least.

Of all the new papers that have been launched on the tempestuous sea of American apicultural journalism during the last two decades, only three or four of them are to-day worthy of notice. And perhaps only one or two of those three or four have any circulation worth mentioning. No doubt, if it were not for a profitable bee-supply business back of several of the smaller American bee-papers to-day, they would cease to exist. It is seldom any more that a bee-paper is started that does not first begin with a bee-supply business. Of course, Mr. Morehouse's paper is a notable exception to this rule. But, then, Mr. M. is an exceptional man. There have been others who thought they were exceptional in the same way, but later found to their loss that they were mistaken.

However, if we say more, some will accuse us of jealousy in the matter. But why should we be jealous of the American Bee Journal's babies? We are not. We only feel sorry that nearly all of them are such puny, weak little things, born only to fill an early grave.

LATER.—Since writing the foregoing, we have received the following letter from Mr. Morehouse, dated April 21:

> FRIEND YORK:—I have just sold the Rocky Mountain Bee Journal to Mr. P. F. Adelsbach, of California, the editor of the Pacific States Bee Journal, and manager of the Central California Honey-Producers' Association. Reason: Mr. Adelsbach wanted it, and for more than a year I have realized that I had "too many irons in the fire." I will now devote my entire time to the production of honey.
>
> Kindly mention this change in the next issue of your journal.
>
> There will be no issue of the Rocky Mountain Bee Journal for April. The outcome of the consolidation will be a new journal with a new name, and a much better journal than has hitherto been published in the West.
>
> Yours truly,
> H. C. MOREHOUSE.

And so "two little hearts will beat as one" hereafter, and under a new name. Well, that's a little different from the usual way of "getting married," as in the latter case only one of the united couple changes the name—at least "in this locality." But "away out West" they may be improving on the conservative old order of the East.

In conclusion, we may say that we think Mr. Morehouse did a wise thing for himself. But Mr. Adelsbach—well, he will get experience with the passing time. We really would like to wish him success, but judging from the copies of the Pacific States Bee Journal that we have seen, he has practically a limited idea of what it means to get up a creditable bee-paper, either typographically or in any other way. It is very unfortunate that one who is as sincere in his endeavors as Mr. Adelsbach evidently appears to be, should feel called to publish a bee-paper. It reminds us of the "call" that a very poor preacher had. It was said of him that some one else was called, but that he heard it and answered! Sincere, but mistaken.

Miscellaneous Items

Mr. Sanford Hartman, of Lincoln Co., Nebr., called on us last week. He was on the return trip from attending his mother's funeral in New York State. He is not only a successful bee-keeper, but for 27 years has been an employee on the Union Pacific railroad. He is one of those whole-hearted Westerners one reads about.

* * *

The State Entomologist of Georgia is doing some good work in issuing bulletins, among which is one which will not fail to make fruit-men better friends to bee-men. Bee-keepers will not be surprised at this when they learn that the State Entomologist of Georgia is none other than our old friend Wilmon Newell, late of Texas.

* * *

The State of Illinois will not make an apiarian exhibit at the St. Louis World's Fair, as the State Commission have refused to grant the necessary money to pay for the same. We hope that, some of these days, the bee-keepers of Illinois, after getting their strength united, will arise in their might and insist that their demands be granted at the hands of any commission that has the distribution of public funds. There is no good reason why the bee-keepers' interests of the great State of Illinois should not be adequately represented at St. Louis.

* * *

Mr. C. F. Kannenberg and Apiary are shown on the first page of this number. He wrote us as follows when sending the photograph, Feb. 26:

> I commenced bee-keeping in 1895 on a small scale, with one colony of bees, which I had to take for a debt for a pair of shoes. (I was then in the shoe business.) The first colony starved because I did not know enough about them. Then I bought another colony, the book "A B C of Bee-Culture," the American Bee Journal, and other books. I have studied them all pretty well, but do not know it all yet.
>
> This picture was taken by my son. I have now 80 colonies in winter quarters. I use the 8-frame dovetail hive, and run mostly for comb honey. The last two seasons were poor. In 1903 I got 1475 pounds of comb honey, and 225 of extracted; besides increasing 25 colonies.
>
> The hives stand pretty close together on account of lack of room, so I lost a good many young queens, which made the queenless colonies.
>
> The hives all face south. In the picture I am sitting behind the watering trough; it is a large barrel with one end cut off, and the bottom up. It holds the water for the bees to drink from.
>
> At my left are the shop and honey-house connected with the barn. The shed at the back where are seen the hives, is the winter shed. It is open in front in summer so I can put the colonies in. I have two rows in now.
>
> I sell all my honey to local grocers. C. F. KANNENBERG.

* * *

Honey in a House.—Mr. H. Gilbert, of Jasper Co., Iowa, has kindly sent us the picture of the house he mentioned some time ago as containing a colony of bees with very long combs. When sending the picture he wrote as follows:

> EDITOR YORK:—I have neglected to send that picture on account of sickness in the family. I send it now, but it is not very plain. The shade of the house-roof hides two feet of the combs. You will notice that the center section is dark; that contains three pieces of comb 2 feet wide by 6 feet long. You can see the comb on the right very plainly, but on the left it is not so plain. You will notice at the left, on a line with the board that is partly off, a small, dark spot. That is bees. The honey runs from the dark center to the bees, between the upstairs floor and ceiling—a distance of 10 feet by 16 inches wide, and 10 inches deep. The honey was weighed, and there was 302½ pounds of it. H. GILBERT.

* * *

The Apiary of W. J. Forehand, of Lowndes Co., Ala., appears on the first page. When sending the picture he wrote thus:

> FRIEND YORK:—I send a picture of a corner of my bee-yard. It does not show any of the nuclei, as they are stored over several acres of land below the part shown. This is where I have spent the most of my bee-life, moving here in 1872. I have been interested in bees the most of the time ever since.
>
> The two good-looking fellows in front of the house—the one in shirt sleeves is myself, and the other is Fred W. Muth, of The Fred W. Muth Co., who stopped over to spend the evening with me when on his way to Florida.
>
> I have been a queen-specialist for about 15 years. After trying every branch of the businesss I have settled down to "turn a queen-crank" the balance of my time; that is, if the good people will be as kind to me in the future as in the past. W. J. FOREHAND.

* * *

Mr. J. Q. Smith, of Lincoln, Ill., foul brood inspector for Illinois, writing us April 28, said:

> FRIEND YORK:—I have had a very hard spell of sickness. I was taken down the first week in March, and was just able to leave the hospital yesterday. I am very weak yet. My trouble was abscess of the kidneys. I had a hard pull to get through.
>
> I expect to get to work inspecting about apple-bloom time. I am very much behind with my correspondence, but hope very soon to be able to attend to all. J. Q. SMITH.

It seems Mr. Smith has had just a little more than his share of trouble the past few months. Only a short time ago he laid to rest his invalid wife, and now for weeks he has been compelled to suffer physically as well. We hope he will soon be quite well again, and be able to get out among the bee-keepers.

* * *

Mr. Chas. Becker, of Sangamon Co., Ill., is presented by picture to our readers this week. He was born Feb. 16, 1850, in Weickerdschiem, Kries, Grunberg, Germany, and came to America in 1867, stopping in Cass Co., Ill. He was married in 1871, in the same county; his wife dying May 2, 1902.

Mr. Becker began keeping bees in 1880. He moved to his present location in 1886 with 70 colonies. As his hives were all painted white, the people said he had a cemetery in town.

Mr. B. has been a member of the Illinois State Bee-Keepers' Association ever since its beginning, and has served as its treasurer for about five years. He has also been a member of the Executive Committee of the Association for five years, and on the committee on premiums.

About 15 years ago he went into politics, and in 1897 was appointed postmaster at his place, which position he still holds.

Mr. Becker has 15 acres in berries, and finds a man has plenty of work during the months of June and July with bees and berries. He keeps bees for pleasure, and has at present 75 colonies.

Convention Proceedings

Co-operation Among Bee-Keepers.

Read at the Minnesota Convention, Dec., 1903,

BY W. R. ANSELL.

LAST year, when I spoke to you about "Honey Exhibits," I incidentally made some remarks about co-operation. The soil, I suppose, was hardly ready for them at that time; at any rate, nothing was done, and a certain amount of cold water was thrown on my suggestions. Since then, however, other associations have taken up the matter of co-operation, and in some cases very encouraging work has been done.

I wish now to place before you a few facts and figures, and to make a few suggestions concerning co-operation, and I claim your earnest attention whilst I do so.

It is possible that my remarks will not appeal very forcibly to those bee-keepers who are so fortunately situated as to be able to dispose of their crop at retail prices. The Grocers' Association protects the retail price of honey, and the honey-producers must, if they desire to thrive, protect the wholesale price.

I speak more particularly to those who from the magnitude of their crops, or their occupation in other businesses, are compelled to send their harvest to commission houses, or to sell it to agents or grocers.

With almost every article of common consumption, building materials, help, and even bee-keepers' supplies continually going up, the wholesale price of honey, in this market, is steadily on the decline. Surely, this is not as it should be!

The bee-keepers of one State have formed an association with the result that within two seasons they have bettered the price of honey in car-load lots from 20 to 30 percent. Also, their members obtain supplies at a great reduction on the dealers' prices. But of this, more anon.

In order that you may be able to form some idea of the importance of our industry—an industry yet but imperfectly developed in this State—I will give the result of some inquiries I addressed to the commission men of St. Paul and Minneapolis.

During the past season the Twin City commission sales of honey aggregated 440,000 pounds of comb, and 230,000 pounds of extracted. The average paice for comb was 12½ cents, and that for extracted 7½ cents per pound. These sales, however, include comb honey from western Wisconsin, and extracted honey from the Western States. Of Minnesota production, I do not think we can claim more than 180,000 pounds of comb and 40,000 pounds of extracted honey. These figures represent only commission sales, and, for the most part, the honey would come from a comparatively restricted area. They in no wise indicate the amount of honey produced in the State, and I give them only to show that our market here is of sufficient importance to regulate the wholesale price of honey in our State and in western Wisconsin.

Now, what does 12½ cents per pound net mean to the bee-keeper? You have to deduct for commission 1¼ cents; an average for freight of ¼ cent, and for shipping-cases 1 cent—total, 2½ cents, leaving 10 cents per pound for the comb honey after its production.

I am not going into the cost of production, as that is probably a very variable quantity. Bear in mind I am speaking right along of "Fancy" and "A No. 1" comb honey, and this is sold by the grocers, who have no expense of packages whatever after receiving the honey from us at 18 to 20 cents per pound. These prices are, for the most part, consistently maintained by the grocers, irrespective of fluctuations in the market; and I think the difference between the wholesale and retail prices sufficiently warrants our endeavor to obtain better prices by co-operation. Presently I will try to suggest how this may be done.

Taking now extracted honey: Almost the same ratio will be found to exist between the prices we receive and that paid by the public, as in the case of comb. From the average price of 7½ cents must be deducted for freight, tins, and commission, about 1½ cents, leaving 6 cents net.

The grocers' standard price is 12½ cents, but in this instance they have the expense of glasses, generally from 1½ to 2 cents per pound. The question of extracted honey is also one of greater difficulty to deal with, on account of the huge shipments from the West; and we must be contented if we can maintain the slightly better prices paid for Minnesota white clover honey than those paid for Western honey, bearing in mind the comparatively restricted sale of extracted honey for table use.

An inquiry, why the wholesale price of comb honey is so low to-day, would probably be instructive. I think I can give some reasons, though probably not all.

A phenomenally good crop in most sections around us this year has, no doubt, something to do with it, though it ought not to have. Without any central association it is not to be expected that we can all know just where our honey is wanted. We send it, year after year, to the same market, too often forgetful of the influences of a full or short crop.

Another reason is, the farmer bee-keeper who brings a thousand pounds or so of choice comb honey to town on his wagon, and sells it for spot cash to the grocer who will offer the most money. I have known instances this season where grocers have obtained such lots at 8½ and 10 cents per pound. The farmer bee-keeper is, no doubt, very well meaning; he wants to get the best price he can, but he has not much time to spend on selling honey, and having possibly a long memory, he distrusts *all* commission men for the faults of a few. If he only knew it, there are a number of most reputable commission houses in the Twin Cities, who would obtain much better prices for him, and with whom he would be perfectly safe to leave his honey. Also, he does not know just what that honey really costs him, like the professional bee-keeper. Such sales are quite enough to influence a market, and should, if possible, be prevented.

I have promised to say something as to the cost of supplies. It is a subject we can not afford to ignore; and though there is at least one person present who does not like to hear it mentioned, I think you will admit there is justification for it, when I tell you that a certain honey-producers' association sells goods to their members at from 25 to 30 percent cheaper than they can be bought from the manufacturers themselves. To give one or two instances: An 8-frame hive and super for comb honey, in the flat, which is listed in one catalog at $1.65, is sold by the association referred to for $1.10. No. 1 sections, catalogued at $4.00 per thousand, are by that association charged $3.05; and all other goods can be bought by its fortunate members at proportionately low prices.

These figures are absolutely reliable, and are certainly instructive. Considering that a bee-keeper may be reasonably expected to spend on supplies from 50 to 75 cents a year per colony, a substantial saving should be effected by our combination.

Crudely speaking, my idea is that all Minnesota and western Wisconsin bee-keepers should form a co-operative association. Its members would have to agree to hold their honey at a minimum price which would be periodically fixed by their committee. The committee would keep itself thoroughly informed as to the prospective honey crops, and various markets throughout the States; would advise members where to send their honey, and would, for preference, undertake its sale for them. It would also purchase supplies on the lowest possible terms, and in the best market, and would distribute them to members according to their needs, at cost prices. If members undertook to sell their crop through the association, the supplies could probably be paid for out of the crop, when sold.

I think I have now said all that time will permit at present. I could quote many more facts in support of my contention that supplies are unreasonably high; but I will content myself with asking you to appoint a committee to inquire further into these matters, and, if possible, to take some definite action in your interests. W. R. ANSELL.

In accordance with my suggestion, the Minnesota Bee-Keepers' Association, at a meeting which was the best attended for years, appointed a committee on co-operation, consisting of the following members: W. R. Ansell, Chairman; W. K. Bates, S. Lindersmith, Wm. McEwen, H. V. Poore, P. B. Ramer, A. D. Shepherd, and Mrs. Thompson.

In January, at the convention of the Southeastern Minnesota and Western Wisconsin Bee-Keepers' Association, the subject of co-operation was also discussed, and a committee of the following members was appointed to further the principles then advocated. W. K. Bates, Chairman; Josef M. Reitz, and L. A. Stickney.

Developments have taken place since these meetings.

The price of all wood goods has advanced considerably, and sections are 25 percent higher. The Editor of the American Bee Journal takes an ingenious and optimistic view on this latter, holding that as bee-keepers get 10 cents a pound for the sections (when combined with honey), and only pay 7 cents per pound (at $5,00 per 1000), they make a profit on them anyhow. That seems all right. Can't we get those sections made a little thicker?

Pending the incorporation of a co-operative association for the two States, I would like to suggest to all bee-keepers in Minnesota and Wisconsin that as many as possible in the different districts should mutually agree on a minimum price for their honey, and should send to their nearest supply factory a wholesale order for all the goods they will want the coming season. This will save the retailer's or agent's profit, and reduce freight to a minimum. Even two or three bee-keepers, thus combining, would obtain considerable advantages in price. W. R. A.

Ramsey Co., Minn.

Report of the Vermont Convention.

BY W. G. LARRABEE.

The members of the Vermont Bee-Keepers' Association met in Middlebury, Jan. 27, at 10 a.m. On account of the death of the president, O. J. Lowrey, the meeting appointed J. E. Crane as chairman, and A. J. Gleason as secretary, pro tem.

The first subject for discussion was, "What can be done to improve the honey resources of the State?" led by Mr. Crane, and participated in by others, which was followed by M. F. Cram on, "Is it practical for the honey-producer to attempt to improve his stock?"

The chairman appointed the following committees:

Resolutions—M. F. Cram, D. S. Hall, and V. V. Blackmer.

Nominations—G. W. Fassett, W. G. Larrabee, and J. I. Clark.

AFTERNOON SESSION.

The meeting was called to order at 1:30, and H. L. Leonard gave a very interesting talk on "Bee-Keeping—The Hindrances to the Business in Vermont," which was followed by Prof. H. M. Seeley on "Bee-Keeping—Its Advantages from an Educational Standpoint," which was a very interesting and instructive paper, treating on the anatomy and physiology of the bee and its works. This was followed by a paper by W. G. Larrabee, on "Bee-Keeping—Does it Pay?" who thought it did pay in connection with some other business, but did not advise any one with a good trade or profession to give it up and go to keeping bees.

V. N. Forbes was next heard from on "Bee-Keeping—Its Future Outlook," who thought the outlook was not very unfavorable, but advised bee-keepers to encourage the sowing of alsike clover, all possible, in order to have some honey-plant to take the place of the basswood trees which are being rapidly cut off.

Mr. Crane then spoke on "Which is the most profitable to produce, comb or extracted honey?" and said that with a good retail market extracted honey was the most profitable, and exhibited a few retail packages that he had been using with success. He was followed by G. W. Fassett, who spoke on "The best way to get the most wax." He advised any one who had any quantity of wax to render, to get a wax-press.

At this place the committees made their reports, and officers were elected. The committee on resolution submitted the following:

WHEREAS, An all-wise Providence has seen fit to remove from our midst our brother and president, O. J. Lowrey; therefore, be it

Resolved, That the members of the Vermont Bee-Keepers' Association, in convention assembled, do hereby extend our heartfelt sympathy to his wife and daughter, in their deep loss and bereavement.

Resolved, That a vote of thanks be extended to the proprietor of the Addison House, for favors shown.

The officers elected were: President, M. F. Cram; vice-presidents: Addison County, G. C. Spencer; Orange, C. B. Fisk; Lamoille, E. K. Savery; Chittenden, C. M. Rice; and Rutland, V. N. Forbes. Secretary, W. G. Larrabee, of Shoreham; treasurer, H. L. Leonard.

R. H. Holmes then gave an interesting talk on "The best way to pack bees for winter."

The convention voted to purchase a grip for use of the Secretary, and to be the property of the Association.

The Treasurer's report showed the Association to be in a flourishing condition financially as well as otherwise.

The convention then adjourned.

W. G. LARRABEE, *Sec.*

Contributed Articles

"Keep More Bees"—The Management.

BY E. D. TOWNSEND.

On page 247, under the heading of "Keep More Bees," Mr. Doolittle takes me to task for advocating, what he terms, an incorrect doctrine.

For the benefit of the readers who have not read my articles, I wish to say that practically the only difference between my management and Mr. Doolittle's is during the spring.

With my system, I see that each colony is put into winter quarters with from 25 to 30 pounds of stores—enough to last them until the honey season opens in June—then they are packed away in chaff hives, and they are not disturbed during all this time. With the above system, I get nearly as good results in extracted honey as can be accomplished with Mr. Doolittle's method of spreading the brood, and stimulative feeding during the spring.

While the careful bee-keeper can work this intense system and make good wages, perhaps nine out of ten of the readers of the American Bee Journal will make more money, in the long run, by working my system. I know every turn of the Doolittle method of spring management. For over 20 years, or till I began establishing out-yards, his methods were used more or less. But there came a time when my ambition was not quite satisfied with the results of one yard. Then it became apparent that some system must be devised where a great share of the work must be done with hired help. Then the thought came to me, Can I hire suitable help to do this "spring management," as Mr. Doolittle terms it? If so, wouldn't it be more profitable to "cut out" this spring-management plan, and use cheap help, the kind that is so easy to secure? I decided on the latter.

Now I hope the reader knows my position a little better, so he will be in a better position to understand the figures I am about to present.

Yes, I have good company, as Mr. Doolittle admits; many of them that cannot be classed with the slip-shod or "corner of the fence" bee-keepers that Mr. Doolittle would allow the reader to believe all that did not follow his methods are likely to be.

Heretofore I have never made any comparisons of the two methods, from my point of view, but at the risk of being criticised I am going to make the claim that one-half of the readers of the American Bee Journal will get more extracted honey on the let-alone plan; that quite a percent of the balance will get results about the same; while a few careful bee-keepers, like Mr. Doolittle, will get more honey.

No, I was not ignorant of the fact that it would take twice as much honey to keep 100 colonies a year as it would to keep 50, each consuming 100 pounds of honey.

I am very glad, indeed, that Mr. Doolittle admits that with my management I can care for 100 colonies as easily as he can 50 with his "management plan," inasmuch as I am going to tell the reader how, with my let-alone plan, he can secure the same results with the *same* amount of bees in a *few more hives*. If I had used this last term, instead of a "few more bees" there would have been no need of this article, because Mr. Doolittle would have understood me better.

I told the reader at the first of this article, that the only difference between my system and Mr. Doolittle's is in spring management. Let us see.

I quote from Mr. Doolittle's article: "Which is the cheaper, a little extra manipulation [100 percent], or the extra colonies, hives, etc., and the *honey* that they consume?"

In the first place, I am very positive that there is no system of stimulative feeding, and spreading the brood, where 100 percent more bees can be secured before the honey season opens than they will rear on the let-alone plan, where they are tucked up warm and have an abundance of stores. But in careful hands there likely is some gain. I have always estimated about 10 to 15 percent, but to be on the safe side we will place it at 20 percent gain in very careful hands. Now I am ready to talk about the extract above, or that part that reads, "the *honey* that they consume." Now isn't it a fact that large colonies during breeding up in spring, also during summer, to some extent, consume more honey than a moderate-size colony? I think that we will all agree that this supposition is correct. If so, would not 50 colonies consume just as much honey breeding up a force of 50,000 bees each, or 2,500,000 all together, as 60 colonies would to breed up the same number? And more, isn't one bunch equal to the other, as extracted honey producers? After examining these figures, will the ordinary bee-keeper be in any wise nervous about a "few more bees" (in this case actually the same number) consuming all the surplus, so there will be no profit to the bee-keeper?

About all the extra expense (in honey) would be the extra amount the 10 extra colonies consume during winter, say 15 pounds each, or 150 pounds all told.

In the spring of 1901, when I moved up here to Mecosta County, from Clinton County, my home yard was left behind, and was worked from here, 50 miles away. This yard consisted of 85 colonies in 1901, and 72 colonies in 1902, spring count. Now, with eight visits we harvested 15,000 pounds of extracted honey that sold for 8 cents a pound, on the cars there, or $1200 for the two years. This yard was one-third of a mile from any house, and there was no one there to hive swarms or do any work between these four visits a year, with the exception of twice each year a neighbor bee-keeper looked them over, and added upper stories on top where needed. These bees were packed in chaff the last of September or first of October, then there was nothing done to them until the first of the following June, when they were unpacked and the upper stories given. This was an eye-opener, and I wondered what I had been at these years.

While the spring management of all my yards is the same as above, all the yards near home are visited once a week during the honey-season. This is all that is necessary, and it gives one time to get a crop of honey from several yards instead of putting one's time all on one yard.

We have a honey-house at each yard, and everything that is necessary to run it with. Especially do I aim to have upper stories enough to hold the crop in an ordinary season, thus putting our whole time to securing the crop during the flow. Then in a week or ten days after the flow stops, we commence extracting. With this management we get a grade of honey that brings the top of the market, and is usually all spoken for before it is off the hives.

After these experiences can you wonder that I say, Stop fussing with your bees; start out-yards instead; scatter them over the country, enough in a place so they will bring you a good, fair amount of surplus, as your share? With us, if we get 7500 pounds of surplus honey per yard we are satisfied.

As one man can do all the work of six yards, as long as his supply of combs last, isn't this much better than fussing with one yard, and trying to double the yield of that yard? Or, in other words, the aggregate has been much greater since we discarded the old, intense system for the new, up-to-date method. Mecosta Co., Mich.

Starting Apiaries—Priority Rights, Etc.

BY L. V. RICKETTS.

On page 167 (1903), in answer to the inquiry of Mrs. Hoffman, as to starting an apiary, Miss Wilson says: "Is the ground fully occupied by other bee-keepers? If so, it would be transpassing for you to start another apiary."

Now suppose that this lady is the owner of say 80 or 160 acres of land, producing alfalfa. Then if she should start an apiary, so as to have her bees gather the nectar from this alfalfa, she would be a trespasser, eh? What right has the bee-keeper, who has for eight or ten years, been getting the use of this alfalfa field as a bee-pasture, to say to this lady that she shall not, or at least should not, start an apiary on her own land; and if she does, that she will be considered a trespasser? Has he, his heirs, or successors, a perpetual right to all the nectar within gathering distance of his bees?

Then, again, suppose that at the time this bee-keeper started his apiary, the land that this lady now has in alfalfa was a barren desert, producing no nectar at all; and as soon as her broad acres of alfalfa should have begun to yield nectar, that she then wished to start an apiary. Would she not then have a moral right to do so? There are scores of similar cases arising every year in the West.

On page 346 (1903), in writing on the subject of overstocking a locality, Mr. Hasty concludes by saying: "The crowding bee-man comes much nearer to being a hog, pure and simple." Then, again, on page 105 (1904), he says: "Furthermore, let us require it of every man, that he respect such rights, else be considered, inside the fraternity, as an Ishmaelite and a scamp." Are such expressions becoming to one occupying the high position among the fraternity that he does, to say nothing of the spirit that prompted him? A man or a woman, owning and having possession of a tract of land, has a moral and legal right to start and maintain an apiary on it, unless for some valid reason it is proven to be a public nuisance.

There has been quite a lot written on this subject of late, by different writers, and nearly all have tried to show that it is at least a moral wrong for any one to start an apiary in a territory occupied by other bee-keepers. With the exceptions of bee-keepers in Idaho (page 196), who say three miles, none of them have said what shall constitute a bee-keeper's territory.

On page 473 (1903), Dr. Miller says: "Bees have been known to go as much as seven miles, but probably not with profit more than two or three."

On page 6, Mr. G. M. Doolittle says, in substance, that he has had tons of basswood honey stored from the tops of the heights seven or eight miles away from his apiary, during the past 30 years.

Now let us calculate a little: If bees go 8 miles in one direction from their home to gather nectar, of course they will go 8 miles in the opposite direction, provided there is nectar there, and other things being equal. Then we find that Mr. Doolittle's bees are able to occupy an area in the form of a circle, whose diameter is 16 miles. The area of this circle is 201 square miles, or 128,640 acres. This is sufficient land to provide homes of 160 acres each for 804 families. Now the question is, Shall these 804 families be refused the right to start an apiary on their own land, just because some one has an apiary already established in this area, with bees enough to gather all, or nearly all, the nectar therein? Of course, this is a larger area than would generally be considered as being occupied by the bees of one apiary. Yet who shall determine the size of the territory occupied by the bees of one apiary? Shall each apiarist be the judge as to how far his bees go to gather, and how near to them another bee-keeper may start an apiary, without being an "Ishmaelite," a "trespasser," a "scamp," and a "hog?" Does a man having one or more apiaries have the same prior moral right for each of them as he does for his home apiary? If so, what a vast domain Mr. Cogshall must have. (If my memory serves me right, it is he who has about 3000 colonies).

On page 789 (1903), Mr. H. H. Hyde says: "We have about 1100 colonies of bees, located in 10 apiaries from 7 to 9 miles from home"—another large domain. Shall all others nearer to these honey-kings than twice the gathering distance of their bees, be perpetually restrained from starting an apiary, or producing any honey, even though there may be tons of nectar secreted by the flowers on their own lands?

The starting of an apiary by a man in his own dominion is a right that belongs to every man, and I believe that most men will be slow to relinquish this right, Dr. Miller to the contrary notwithstanding (page 183). If such a bill should become a law it might not be held as constitutional when put to the test. Whitman Co., Wash.

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we have used it ourselves.

PRICES, prepaid—Sample copy free; 10 for 20 cts.; 25 for 40 cts.; 50 for 70 cts.; 100 for $1.25; 250 for $2.25; 500 for $4.00; 1000 for $7.50. Your business card printed free at the bottom of the front page, on all orders for 100 or more copies. Send all orders to the Bee Journal office.

See Langstroth Book Offer on another page of this copy of the American Bee Journal.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

A Report—Gathering Pollen, Swarming, Etc.

Now, as regards my bees: A year ago last June I got a hive of bees. Last year I kept giving them room, so that they did not swarm—at least not to my knowledge—and I watched them closely. I obtained a surplus of 58 pounds of honey in sections filled solid, besides a number of sections that were unfinished. The honey is most delicious. How proud I was of my successful venture in bee-keeping! Please tell me if you think my bees could have swarmed, and yet have given that amount of surplus.

One warm day, early this month, I raised the coverings just around the sides of the hive, and as far down as I could see, those 10 frames were brimming with bees. Such activity, and such deep roaring!

On the 21st of this month (April) my bees began carrying in pollen. It was of a lemon color. From what was the pollen obtained?

I wintered my bees on the summer stand. One of these days I would like to tell how I pack the hive inside and out, for the reign of winter. I feel quite triumphant that my colony is in such fine condition after our long and severe winter. I hope there will be no spring dwindling. I hear of a number of colonies in this vicinity that were killed by the cold weather.

In what part of the cluster does the queen stay during the winter?

I intend to buy one or more colonies this year, but I want to keep the colony I have from swarming, if possible.

And now you have the history of a very small apiary—a very small "acorn" from which, some day, an "oak" may grow. Kate V. Austin.

Wayne Co., Ind.

It is possible that they swarmed and still gave you 58 pounds of honey, but not probable, especially as you watched them closely.

Most likely the lemon-colored pollen was from soft maple.

In the winter the queen may be in any part of the cluster except the outside or shell of the cluster.

"Foundation Plan" of Preventing Swarms.

I don't think this department belongs to me individually, but—I have a few more questions, if you please.

I intended trying the "foundation plan" to prevent swarms, but I need 100 more combs in order to have all colonies "double deckers" next spring.

1. Would there likely be more gain in the end to try to prevent the swarms and remove supers after the white honey-flow, substituting an upper story of full sheets of foundation in order to get these combs? or let each colony swarm once (or force them), hiving on starters (drone-comb afterwards removed)?

2. I have placed a frame hive containing combs over a box-hive, first removing the top from the box-hive and closing all cracks. After the queen commences to lay in the frame hive I intend to make sure she is there, and put an excluder between the two hives (the old box-hive to be removed in 21 days). Now, won't the bees below imagine themselves queenless and rear queens and swarm out with these virgins before the 21 days are out? If so, what is best to do to prevent this, and at the same time get rid of the box-hive?

3. On page 426 (1903), I notice "Iowa" gives a plan for shaken swarms, and asks questions about the same. Dr. Miller requested him to report his success with his plan, which report I have watched for but never saw. Do you know if he was successful, or if any one else was, with the plan?

4. Now, if about swarming time nearly all of the bees were shaken on starters, and supers put on, then the wire-screen having only one hole of excluder zinc, and last the brood added, do you and Dr. Miller think the result would be satisfactory?

Wouldn't it be necessary to put a frame of brood below to keep the bees from deserting the queen? If so, when should that frame be removed?

I want those extra brood-combs built, but not at the expense of part of my crop of honey; therefore I would like to keep the bees together, if possible.

Mrs. C. D. Mears.

1. You might get more honey by the first plan, but you would not be so likely to get the combs built, for unless you have a heavy fall flow, comb-building will not be so good after the white-honey harvest. It may not be amiss to say that you are not likely to need enough combs to make *all* colonies double-deckers next spring. Unless extremely fortunate you will find some so weak that you will do well if you get them to fill one story.

2. The bees in the queenless story may, and they may not, start queen-cells. One way to head them off will be to take away the box-hive and put it on a new stand 10 or 12 days after giving the excluder. That, however, will leave you a colony in the box-hive. If you will pardon me for saying so, I don't believe you will like the plan you propose, if you should give it a trial. It may be a long time before the queen goes into the upper story, and she may not go up at all. You may do better to put the new hive below and the old one above, first driving the bees out of the old hive, so as to get the queen below, then holding her there with the excluder. Then in 21 days the old hive can be taken away. The objection is that the bees will store a lot of honey in the old hive in that 21 days. Perhaps the English plan may be better. Wait for the first swarm, hive that in the new hive, and 21 days later finish up the old hive. If the first swarm does not come early enough to suit you, you can drive a swarm.

3. I think he never reported. We tried the plan, but it was not a great success. One trouble, if there had been no other, was that the sections were blackened with the old comb that the bees seem to have carried down to use in capping the sections.

4. We *think* the result would not be different, the bees blackening the sections the same; but you're never very sure about what *the bees* will think till the case is submitted to them. It would probably not be necessary to have a frame of brood below to hold the bees with the queen, but the frame of brood will hurry up work there, and it can be removed as soon as the queen lays in the other frames, say within three or four days.

You can't get something for nothing; and you can't get as much honey if you have the bees do something besides.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

NEVER-FAILING METHODS OF QUEEN-INTRODUCTION.

James Poindexter's never-failing way to introduce a queen is enough different from other never-failing ways that we shall do well to look over its points with care. The methods usually crowed over as reliable methods in point of fact are mostly used when circumstances are favorable in the main. What we are after is a method that can be depended upon in famine times, out-of-season times, robbing times, times when bees are "cross as two sticks," and contrary as two old rams—times when the other never-failing methods all fail. We shall find that Mr. P.'s way takes work and time; but if it is what it seems to be we can stand that. Point 1: Make sure no queen is present. (Very necessary, and nothing new about it.) Point 2: Make sure there is plenty of unsealed honey in the hive. (Valuable. Especially valuable for this method. Often unthought of.) Point 3: Make sure the bees are all at home—and shut in there. (Usually unthought of. You see, we want to reconstruct their tempers; and enough unreconstructed ones to make a small ball might defeat everything.) Point 4: Make longer and more thorough work of "drumming" them than previously thought of in connection with queen-introduction. We wish to make sure that every bee has plenty of honey down, and every one in the mental condition of perfect surrender—ready to sing the hymn, "O to

Be Nothing, Nothing!"—perfectly willing, and more than willing, to renounce home and go any place. To do this the hive itself is made into a rocking-horse sort of bumper, and steadily bumped for at least more than a quarter hour by the watch. Point 5: Make sure that the queen and her attendants are not hungry. (Their chance to take a bite is going to be poor for a spell.) At this stage of the proceeding the queen and her escort are run in. Point 6: Continue the bumping for half an hour actual time. (This is the point which apiarists of the "Tom-tinker" build of mind will leave out and spoil everything. Long ago suspected that the queen is oft as much to blame as the bees for introduction failures. This half hour is devoted to reconstructing the mind of the queen; and incidentally it gives her as much of the odor of the hive as possible.) Point 7: Open the hive after dark. (Don't want any flurry—especially not any robbers on the scene.) These are all the points Mr. Poindexter gives, but I would venture to add another—an old one. Point 8: Don't try to look in upon them for several days. (Queen might run; bees might take after her; ball might form—and fat all get in the fire at last.) As a matter of preference I should prefer that the bees should know that they were queenless for quite a number of hours before the main operation—and that can usually be secured. I incline to the opinion that the above is a valuable contribution to our stock of lore. Only be careful that our honorable Tom, as above, does not persuade us to accept an arrangement that merely raps the hive without moving it. Page 197.

DR. BOHRER'S MEAL PRESCRIPTION.

I see Dr. Bohrer, on page 199, has been getting up for me a pretty big meal. Think I shall call in my friends to help eat it—if I've got friends enough to eat such a pile. He would fain help me sell the horse to myself, but seems to think me a near relative of the man who wants to "*eat* the horse and chase his rider." Most people only think of sugar and honey as relishes, taken mainly to make a larger quantity of something else move on. But you at least, Mr. Bohrer, know that that is not the only way to eat them—not the best way if they are to be eaten in abundance. Six ounces of honey eaten by itself the last thing at a meal admits of *some* previously taken food—and that some with the idea of giving proper balance. Crackers balance well to give non-fluidity; and milk and nut-butter balance well against the lack of nitrogen in honey. The amounts I mention are naturally influenced by the fact that I take but one meal a day—wouldn't sound so big if they were divided by three.

Of the spread he sets out pork is an abomination to me, and was before I became an invalid. Cabbage is not far behind, except that under strong social duress I used to eat a little of it in fear of being called queer. Cheese I used to eat, but not any more. Coffee I don't drink—but like it well enough—but at a table which affords, of the things which I eat, not much else than bread and potato, I sometimes drink it. Bread and coffee seem to fit together pretty well. I beg the pardon of the younger readers for putting in so much diet and digestion talk. A lot of us have got to the point where how to head off indigestion is a problem of personal interest to us—and you youngsters will come to it by and by.

But where the Doctor struck in my point was that sugar agrees a little better than honey does with *my* previously taken potato and bread and milk. Not ready to give that up yet.

As to the bulk of his article, we will not undertake to deny that he finds the filmy scales of wax doing mischief in some diseased stomachs. But we incline to doubt pretty strongly whether any great number of people are injured by the wax in honey. Surely, scales so soft and thin don't scrape any harder along our amidships than the bran-scales of whole-wheat foods do. When the doctors advise us to eat graham and whole-wheat preparations, we may eat comb honey also, I take it.

"The Hum of the Bees in the Apple-Tree Bloom" is the name of the finest bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us *one new* yearly subscription to the American Bee Journal at $1.00.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Introducing Virgin Queens.

I have been rearing cells and then put them in cages, and have tried putting them both in queenless hives, and hives over excluders, and for some reasons over 50 percent of the virgins die from lack of attention by the bees. Can you help me out? Roots advise introducing virgins queens to the nuclei, and I want to know how successfully to get the cells hatched and in the shape of virgins? TEXAS.

ANSWER.—I must confess your question puzzles me. I have never found any difficulty in having queenless bees give proper attention to virgin queens in cages so long as none was allowed to be free in the hive. But you can make a sure thing of it by provisioning the cages in which the cells are enclosed, and these can even be put in the same story with a laying queen.

◆

Moth-Balls—Transferring—Shading Hives.

1. Will moth-balls keep out moths? and will they injure the bees and honey. If they will not do, what is the best thing to keep moths out?

2. Do you think it would pay to transfer from box-hives to those with frames? If so, when is the best time to do it? and would there be any natural swarms?

3. When is the best time to hive bees from a bee-tree? and how is the best way to do it?

4. Will it cause the bees to rob if they are fed sugar syrup in the open air, away from the hives?

5. Is it absolutely necessary to have hives shaded in summer? and will the heat melt down the combs, as some talk as if it did? MISSOURI.

ANSWERS.—1. Probably they would not keep out moths unless so strong as to be offensive to the bees. The best thing to keep out moths is to have *strong* colonies, and even a weak colony will do good work at defending itself if the bees are Italians.

2. Yes, if you intend to take advantage of the movable feature. If you don't intend to handle the frames there is no advantage in having them, as they are no better for the bees. Transfer 21 days after the prime swarm. That will not interfere with the swarming.

3. If you want to get the bees to working in hives as soon as possible, chop down the trees during fruit-bloom, split open, and transfer the same as transferring from a box-hive. If you want to get the most honey and don't care for the bees, take them immediately at the close of the honey harvest.

4. Not likely, unless some foolish thing is done about the hives.

5. I have had combs melt down in hives so densely shaded that the sun never shone on them all day long, because there was too little chance for the air to get at them, and I think I never had such a thing happen where a hive stood out in the open sun with a full sweep for every breeze. But in some places the sun may be too hot to do without some kind of shade.

◆

Questions on Bees and Other Subjects.

1. Which strain of Italians is better, golden or leather-colored? How are Adels?

2. I am mailing you to-day a cage containing bees. What kind are they?

3. I also enclose a bee in a pill-box. What is the matter with her wings? I often find them on the ground in this condition, unable to fly.

4. Does it pay to make your own foundation?

5. Does it pay to make your own hives?

6. What causes bees to carry brood out of the hive? The brood I refer to was white, odorless, and full-sized, with the eyes just beginning to color.

7. Which is the better, the Hoffman or staple-spaced frame? Do the bees propolize the Hoffman more than they do the staple-spaced frames?

8. What is a jouncer?

9. Will all other clover grow where alfalfa does?

10. Do sunflowers yield honey to any great extent?

11. Are Italians any larger in size than blacks or hybrids? TEXAS.

ANSWERS.—1. Some goldens are better than some leather-colored, and vice versa. Prehaps as a whole the leather-colored are better. I have had no experience with Adels.

2. If they are all from the same colony I should judge they are hybrids.

3. Seems to be a case of non-development; perhaps lacking vitality to become fully developed.

4. Not in this country, although thousands of bee-keepers make their own in Europe. A good many went into it in this country when

foundation was first introduced, but gradually it was given up to the special manufacturers. Possibly it might pay better now than during the past few years, as there is now a greater margin than theretofore between the price of beeswax and foundation.

5. That depends somewhat upon circumstances. It may pay some, and not others.

6. If there was much of it, it was likely starvation. Later in the season drone-brood will be thrown out at a time when bees kill off drones. A very few specimens of such brood thrown out at any time may have no special significance.

7. I don't know which you would like best; I prefer the staple-spaced, and still more the nail-spaced. The Hoffmans trouble much more about propolizing.

8. A frame-work upon which a super rests, allowing the bees to be shaken out of the super by jouncing the ends of the jouncer up and down alternately.

9. I don't know, but I think so.

10. No difference in size to be easily recognized.

◆

Hive-Tool—Combs of Honey from a Dead Colony.

1. Where can I buy a Muench hive-tool, mentioned in "Forty Years Among the Bees?" I do not see it catalogued by any of the supply-dealers.

I lost one colony of bees this winter (wintered outdoors). It consumed only about 5 pounds of honey, and was in exactly the same condition, apparently, as all the others that were wintered outdoors, and all of which came through in first-class condition.

2. What killed it?

3. What can I do with the combs? The honey in them has granulated for about 2 inches deep along the top of each frame, and as they are first-class worker-combs I want to save them, if possible.

ONTARIO.

ANSWERS.—1. It is not on the market. Mr. Muench died several years ago, and his widow has done nothing with the tool, so far as known.

2. Very likely it starved. Yes, I know there was plenty of honey in the hive, but the severe cold was long continued, and when all the honey in the cluster was consumed it was too cold for the bees to leave the cluster and reach fresh stores.

3. Keep the combs for swarms. Sprinkle the candied honey with water and let the bees clean it up, wetting it again as often as the bees lick it dry.

Thinning Honey—Cleaning Wax—Shaken Swarms—Sticks Instead of Wire for Frames.

1. How do you thin down honey to feed bees? If I mix it with water it sours.

2. How do you clean wax? I have some that is dirty and I cannot get it clean.

3. When you shake a swarm and give the swarm the old stand, and give them the bees from the old hive in 21 days, how do you keep the bees from fighting when uniting?

4. When using sticks instead of wire, why do you make the sticks shorter than the depth of the frame? and which bar do you let the sticks touch, the top or bottom bar?

5. Why not drive the queen and bees into the new hive, and put the old one on top, with a queen-excluder between? Will it do as well as shaking a swarm, by putting the hives side by side?

VIRGINIA.

ANSWERS.—1. Merely stir the honey and water together—all the better if the water is hot. It will not sour if fed within a day or so, and it ought not to be allowed to stand longer.

2. It will help very much if you keep the wax hot a long time, so as to give time for impurities to go either to the bottom or top. A large quantity of hot water will help. Or, a small quantity may be put in the stove oven at night, as soon as the fire is low enough to avoid danger, and remain until morning. Manufacturers cleanse further by the use of sulphuric acid, but the acid will make bad work in most vessels you are likely to have. If you have any arrangement by which you can throw a jet of steam into the wax, you can make it work in a wooden vessel, or you might use a stone vessel on the stove—I mean without the steam. Use one part of acid to 50 of water for the worst cases, and one of acid to 200 of water where the least cleansing is needed, stirring in the acid while wax and water are hot. Be careful in stirring in the acid, for it may boil up violently.

3. The condition of the bees and the time being likely to be during a honey-flow makes it probable that the bees will unite kindly without any precaution.

4. If the sticks are exactly as long as the inside depth of the frame, they cannot so quickly be put in place as when a little play is allowed. The sticks may be put with one end close against the top-bar, or against the bottom-bar, or anywhere between.

5. That will work all right if you want the bees to store honey in the old combs. Of course it wouldn't work very well in producing comb honey.

FROM MANY FIELDS

Expects a Good Season.

Last fall I had 120 colonies of bees, mostly in good condition, but I have lost 11 colonies to date, that I know of. Most of the colonies that died did so with plenty of stores, but on account of the continued cold weather, they could not change positions to get to the honey. I get most of my surplus honey from basswood and wild cotton, or milkweed. I examined a few colonies a few days ago, and found some brood hatching and in good condition. Snow to-day is about two inches deep, and the temperature 24 degrees, but I hope for better weather in April. I expect a good season.

E. C. MERSINO.

Randolph Co., W. Va., March 16.

Cellar Too Cold and Damp.

I put 60 colonies of bees into the cellar last fall, but my winter loss will be heavy, as the cellar has been too cold and damp, with no facilities for raising the temperature or drying. Those who want the damp cellar may have it. I can't have mine too dry. The winter has been very cold in our northern country, but warm weather is not far away.

O. B. GRIFFIN.

Aroostook Co., Maine, March 10.

Wintered Unusually Well.

Our bees all wintered on the summer stands without protection from cold. We were thinking, two days ago, of bees swarming, as they average from 3 to 6 frames of brood with some drones flying, but to-day it is all off, as we have about two inches of snow on the ground, which is something out of the ordinary this late in the spring. Fruit-trees have all bloomed, except apples, which are ust opening Bees here wintered unusually well. I did not lose one colony out of 25, but there are many colonies that are living from hand to mouth now, as they are breeding very heavily. They will perish soon if the weather continues cold for a few days, as it now threathens. My bees are the 5-banded. They are very gentle and seem to be hardy. They stored from 50 to 100 pounds of honey per colony last year.

Long live the Editor of the American Bee Journal, who writes to us every Thursday, and never fails to interest us. I have read many articles in the "Old Reliable" which were worth dollars to me in the production of honey.

W. P. BROWNING.

Barry Co., Mo., April 9.

What Caused Their Death?

I am but 14 years of age, and have handled bees since I was 10. I started in the winter with 14 colonies, all of which were strong excepting two, which were late swarms. They died for want of food. Eight of the other colonies have died, being scattered all through their hives in the midst of plenty of honey. I would like to know the cause of their death. They were left upon the summer stands without any protection. We have had a very prolonged winter, sledding from Thanksgiving up to the last of February without any break, and the mercury ranging from 10 above to 4 below zero.

EARL P. O'NEAL.

Preston Co., W. Va., March 16.

Bees Dwindle Away.

Bees continue to dwindle away. I think the loss in this county will reach perhaps 80 percent. I have 39 colonies yet out of 105, and have bought 11 more colonies, so I now have 50, which I shall try hard to save. Many are weak, however.

B. W. PECK.

Ashtabula Co., Ohio., April 11.

Wintered Well—Windy Weather.

My bees have wintered well so far. Even September swarms pulled through in fine condition. They started gathering pollen April 1, but have not done much since that time, as

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we are having a great deal of wind—yes, almost hurricanes—this spring, and prospects are not flattering in this part of Nebraska, unless the weather soon changes so that they can get the benefit of the wild fruits, of which we have a great supply along the creek bottoms. HENRY HANSEN.

Sherman Co., Nebr., April 11.

Sweet Clover for Pasture.

Allow me to give my experience with sweet clover as a pasturage for cattle and swine. It makes one of the best pastures I know of. I have timothy, bluegrass, and wild blue-joint, all in the same pasture, but the cattle will always take to the sweet clover first. Stock should be turned on the clover before it gets too large, or they will not like it so well. I had it in my pasture for 6 years, and know of nothing else that I like so well. It seems to grow as well in dry weather as it does in wet, and it is not only good for pasture but is a great honey-producer, as many bee-keepers know. W. G. GUNDERSON.

Clay Co., S. Dak.

Apiarian Progress—Introducing Queens.

I will want the American Bee Journal as long as I continue in the bee-business. I do not understand how any one who has taken the Bee Journal could cut themselves off from their brother and sister bee-keepers, as I do not think any of us know any too much about the bee and its plan of work, or how to handle bees to get the best results. About all the bee-keepers with whom I have talked, or whose articles I have read, have at some time failed to get the results they desired. When one thinks he understands bees so thoroughly that he knows just what is profitable, something moves the bees to act as though they had something to say about the plans. At best they occasionally rise up and act differently from what we expect, or want them to do, so I am thoroughly convinced that the oldest and smartest of bee-keepers have not reached the science of bee-culture yet. I think as I heard the president of a medical college say, in regard to the practice of medicine, that it was not nearly a science yet, and he did not think it ever would be, as there are always things coming up that baffle them. I think the same about bee-husbandry. We always have, and always will meet with difficulties that we cannot understand; so I think it a good idea for us bee-keepers to keep in close touch with one another's experiences and thoughts, in order that we may help each other. I know of no other way whereby we can do this as well as by writing to some good bee-paper, and giving our different experiences. For myself I do not know of any other paper that I like better than the American Bee Journal. In bee-keeping I believe as the Apostle says in regard to the church, that the head can not say to the foot, "I have no need of thee," etc., for we ought to help one another.

When I look back over the past 50 years to the time I was a boy 11 years old, helping father fit up bee-gums (for that is what we called them), I can see where we have made great advancement in the handling of bees.

Perhaps some of our younger people would like to know why we called the place we prepared for the bee, "gums." They were made by selecting a hollow sycamore tree, some 16 or 18 inches in diameter, and cutting it into pieces about 16 inches long. These pieces were cleaned out nicely inside with an inshave, and four holes were bored about ⅓ of the distance from the end intended for the top, and sticks put through these holes crosswise of the hive. A board was then tacked on top, and the "gum" was ready for the bees. When we wanted honey, we would pry off the top, and make a rag-smoker by setting a rag afire and using our lungs for a bellows. We would blow the smoke onto the bees and cut out the honey, always leaving them enough to feed them through the winter.

In the spring of 1903 I started with 25 colonies of bees, and you may be the judge whether I have advanced or retrograded in bee-culture. I had my bees all in Langstroth hives with movable frames. I run them for comb and

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extracted honey. I extracted 1600, and saved about 200 pounds in combs in case of needing to feed in the spring of 1904. My bees also produced over 1200 pounds of as nice section honey as could be put up. The comb honey sold for 15 cents a pound, and the extracted for 10 cents. I have sold all my honey, and could sell more if I had it. It was all sold about home, except 400 pounds, which was shipped, part to Kansas and part to Indiana, to fill orders.

My bees increased to 56 colonies. I wintered 30 colonies in the cellar, and lost 2 colonies and 3 queens. All left plenty of honey to have taken them through. The other 26 colonies were wintered on the summer stands in chaff-packed hives. Those wintered on the summer stands came through in far better condition. I did all the work myself, and did my own cooking and dish-washing while taking care of the bees and honey; so you see a man can do all of his work in caring for his bees, as well as can some of the good sisters. Now, I hope that none of the sisters will think I am hunting for a helpmate, for I have my bees 12 miles out on a farm, and we live in town. My good wife thinks, as the Bible speaks of part of the Children of Israel, that staying back with the stuff is as much as going to battle. Therefore I give my experience to help others, for I do what I can to help pay expenses, and preaching the Gospel is my business.

The way I requeen when I take away a poor queen is as follows: I hunt out the queen with as little disturbance as possible, and as soon as I get her away, I fill the smoker afresh with fuel, and pour the smoke on the bees until they fill up, and then smoke again until they are well scented with smoke, then smoke a little the queen to be introduced, and let her run in amongst the bees, and close the hive and leave it a while. I prefer making the change in the evening.

ARTHUR A. HOUSER.
McDonough Co., Ill., March 26.

Big Snow-Storms in New York.

Since writing before we have had two big snow-storms, with no warm weather intervening. The one of the 19th and 20th was with a high wind, and the snow is so piled in our roads that the road is left in many places, going in the lots or on the sides, anywhere to get around the from 3 to 5 foot drifts. The mercury stood at 9 degrees above zero a few mornings ago. The bees are still in the cellar, for which I am glad. There will be very few colonies alive, of those left out when May comes.

G. M. DOOLITTLE.
Onondaga Co., N. Y., April 21.

A Very Cold Winter.

It has been a very cold winter, the average temperature for January, 1904, being 8½ degrees F. above; for February, 8; and March, 22¾. In March, 1903, the average was 35 degrees; February, 19 2-7; January, 17¾.

I started last fall with 70 colonies, and have lost 15 up to date. There had not been a day warm enough for bees to have a flight since November 17, until day before yesterday. They have now had three nice days, and have improved them. Last year they were carrying in pollen on March 18. I am looking for a light honey crop this year, as ⅔ of my colonies are weak. I have had to feed some of my colonies for the first time since I began to keep bees, and that was in 1885. My honey is almost all sold. All of my extracted honey, about 1800 pounds, was sold at home.

C. F. BAKER.
Allegany Co., N. Y., April 7.

A Winter Report.

I bought 2 colonies of bees, and now have 7. I put 8 colonies into the cellar last fall. This winter I set them out on a warm day, and one colony that had gotten damp in the cellar left the hive and united with one of the other colonies. My colonies are stronger and better than they were last year. I have them outdoors, and they enjoy the warm days. I never lose any bees in the winter. I look them over about once a week. The past win-

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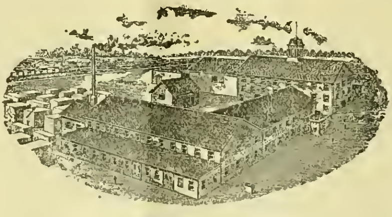

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ter the bees got under the cover, or on top of the combs, more than they did in other winters. I may feed some to get them strong, and get lots of bees for the white clover. I shall try to clip the queens, if I can find them. I read "A B C of Bee-Culture," and watch the American Bee Journal. I have my bees in good 10-frame Langstroth hives. There is no large apiary near me.

F. A. Snyder.
Boone Co., Iowa, April 6.

How the Bees Have Wintered.

In the American Bee Journal of March 10 was published an article which I wrote in an effort to describe how I prepared my bees for wintering on the summer stands. I write now to say that I had what I think is very good success in wintering the bees the past winter, prepared as I described in that article. I had 34 last fall, and succeeded in wintering 31 of them, and they are in good condition now. So far as I have been able to learn, there are not in this vicinity more than 25 percent of the bees that lived through this hard winter on the summer stands. Some have lost all they had.

A. J. Kilgore.
Wood Co., Ohio, April 8.

Severe Winter on Bees.

We have had a very severe winter, and I have lost 20 colonies out of 30 wintered on the summer stands. All have died with an abundance of honey. The prospects are good for a good flow this year—abundance of fruit-bloom and white clover very plentiful.

Wm. R. Webb, Jr.
Kent Co., Del., April 9.

Discouraging Prospects.

Prospects in this section are quite discouraging. I am a beginner with bees, but I went into the winter with 15 colonies and saved 6, wintered on the summer stands. I am afraid my bees have foul brood, but I am not well enough posted to tell. I think that I will take the wax out of the old combs and begin anew, and only on a very small scale. I don't think that this is a very good locality for bees, but I can sell all the honey I can produce at 15 or 16 cents a pound.

I like to read the American Bee Journal.

Ionia Co., Mich., April 30. Wm. Nye.

Result of Wintering Bees.

Out of 21 colonies from last year I have 15 left, 3 have frozen during the winter, and the mice got into 3 hives and killed the bees and ate part of the honey; I suppose because they liked it. We had a severe winter in eastern Pennsylvania. A person by the name of P. H. Heil, living 2 miles north of the Lehigh river, lost 37 colonies out of 47. Bees were not protected as they should be, which accounts for so many being lost.

Edwin Trittenbach.
Northampton Co., Pa., April 11.

Hard Winter—Making Hives.

It has been a very cold winter here, the hardest for bees in many years. I had packed my 60 colonies on the summer stands early, but had expected, upon returning, to find several dead. I have examined them considerable since my arrival, and I think there are none dead. The most of my hives have outside cases made of $\frac{3}{8}$-inch boards, and set over the hive so as to give $1\frac{1}{4}$ inches of cork-dust packing on the sides, 2 inches on the back (north) end, and one inch on the front end. Some 12 of them are in Dadant hives. These were without outside cases, but are large (15 inches inside), and were packed with cork-dust division-boards on the sides, and $\frac{3}{8}$-inch board sealed, and on top of that a 3-inch cork cushion, with telescope cover.

I notice upon the removal of the cork cushion that some of them have spotted their frames, and it may be that some of them will have dysentery or will spring dwindle.

I hear of considerable winter losses of bees in this vicinity. My brother-in-law at Tyngsboro (Middlesex County) has lost all of his three colonies.

There has been considerable published re-

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will sell tickets to Cleveland, Ohio, and return, account of National Baptist Anniversary, on May 16th, 17th and 18th, at rate of one fare for the round-trip, plus 25 cents. Tickets good going date of sale. By depositing same, extended return limit of June 10th may be secured. Through service to New York City, Boston, and other Eastern points. No excess fare charged on any train on the Nickel Plate Road. Meals on American Club Meal plan, ranging in price from 35 cents to $1.00; also service a la carte. Chicago depot, La Salle and Van Buren Sts., the only passenger station in Chicago on the Elevated Loop. Chicago City Ticket Offices, 111 Adams St., and Auditorium Annex. 'Phone Central 2057

2—15A5t

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Tells all about Bees in California. The yields and Price of Honey; the Pasturage and Nectar-Producing Plants; the Bee-Ranches and how they are conducted. In fact the entire field is fully covered by an expert bee-man. Besides this the paper also tells you all about California Agriculture and Horticulture. $1.00 per year; 6 months, 50 cents. Sample copies, 10 cents.

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50 cents a Year. Mention the Bee Journal

BARNES' FOOT POWER MACHINERY

Read what J. I. PARENT, of Charlton, N. Y., says: "We cut with one of your Combined Machines, last winter 50 chaff hives with 7-in. cap, 100 honey racks, 500 brood, frames, 2,000 honey boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.
Address, W. F. & JOHN BARNES,
995 Ruby St., Rockford, Ill.

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—WE ARE—
HEADQUARTERS FOR THE WEST
for complete line of
Bee-Keepers' Supplies.
Send for our large illustrated Catalog.
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1730 South 13th St., OMAHA, Nebr.
12A13t Please mention the Bee Journal.

cently on the economy of bee-keepers making their own hives. I have made my hives principally, buying the inside fixtures of supply dealers. Formerly, when I lived at Tyngsboro, I had them cut at the box shop with lock-corners; but since I came to this city there are no locking machines, so I have them put up without, and I think they are just as strong. For the good of the fraternity, I will give a description of the 10-frame hives (mine are all 10-frames): Cut the ends 14½ inches, the sides 20 inches, and nail the sides on the ends in the middle, then near the corners put in 2 or 2½-inch screws. At the top of the hive at each end nail on a piece 2½ inches wide by ½-inch thick. This piece will come to the hand-holes, and will strengthen the narrow strip at the rabbets, and prevent the corners from opening. JOHN P. COBURN.

Middlesex Co., Mass., March 15.

Buckling in Wired Foundation.

After reading L. H. Cremer's article, on page 189, on the use of full sheets of foundation in the brood-frames wired horizontally, I was surprised at M. W. Shepherd's experience in wiring brood-frames, and the editorial comment on same, as they are entirely different from my observations and experience of several years in the use of full sheets of light-brood foundation in wired frames. If Mr. Shepherd would leave his wires loose, and bow them down as he embedded them into the foundation, he would get the same results as with thick end-bars and tight wires. But with me tight wires will not work successfully. Mr. Cremer's reasoning, as to the shrinking and swelling of foundation is very good, but the manner of wiring has much to do with getting straight combs. I will give my latest method of wiring, from which I have had very good results:

I use 4 horizontal wires in frames, placing top one about ¾ of an inch from the top-bar, and the lower one not more than 1½-inches from the bottom-bar, and the others placed so as to make the space equal between them. In wiring I draw the top wire tight, and then lessen the tension from top to bottom. My reason for having the lower wire so high above the bottom-bar is to prevent buckling between the lower wires. It gives a weight of bees below the lower wire, while drawing out the foundation, that keeps the foundation straight. Having the lower wire not quite so tight as the top one is a further preventive of buckling. Locality, of course, has something to do with it, as heat and cold affect the foundation. So has the strength of the colony much to do with results.

NEWTON DOTSON.

Nicholas Co., W. Va.

Worst Year for Bees—Other Matters.

The past was the worst year for bee-keeping that I ever knew. Last summer it was very wet and the honey was poor to winter upon. I will lose most of my bees. They died with plenty of honey in the hives. I have kept bees for 25 years and never had much winter loss before. Most of the bees were in chaff hives, well packed. Some that were not packed came out better than those that were. I have always wintered some without packing ever since I have kept bees, and I find that they winter just as well, but do not do quite so well in the spring.

I have looked after the bee-men pretty well throughout this section. The loss here is very heavy, some having lost all. I don't know that the high price of sections will hurt any of us this season. We have the foul brood mostly cleaned up. This winter will settle it, I think—no bees, no foul brood. Most of the bee-men will give it up; that is what they tell me, for some will not have any to start with. I know of no one who winters his bees in the cellar.

I have a friend who uses the Danzenbaker hive. I transferred some for him last spring, and have given the hive a close study. His bees wintered better than mine did in the double-walled chaff hive, and his were not in nearly as good condition as mine were last fall. I used to think bees were safe in the chaff

ITALIAN QUEENS!
Either Golden or Honey-Queens before July 1.

Our GOLDENS will come up with any other Golden strain. Our HONEY-QUEENS are what some breeders call "Red Clover Queens."

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Untested	$1.00	$ 5.00	$ 9.00
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Breeders	5.00	....	....
2 frame Nuclei (no queen)	2.50	14.00	25.00

Nuclei will be ready to ship the latter part of May or 1st of June. When Queens are wanted with Nuclei add price of any Queen wanted. We guarantee safe arrival of all Queens and Nuclei. Our Breeders may be returned after 30 days if satisfaction is not given. Cash must come with all orders. Orders are booked and filled in rotation.

Mr. Gus. Picaman, of Litchfield, Ill., in a letter of Aug. 3, 1903, says: "Send me two untested honey-queens. The one I bought of you two years ago is all right. There are no better."

Mr. Frank D. Gunderson, of Oconomowoc, Wis., says in a letter dated August 1, 1903: "I like your queens the best of any that I have ever had." This man placed an order last August for 24 Nuclei to be delivered this spring.

Address all orders to
D. J. BLOCHER, Pearl City, Ill.
☞ This ad. will appear every other number.
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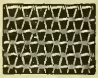

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MOUNT UNION COLLEGE,
Alliance, Ohio.

hive, but not so this winter. The bees that were wintered in the Danzenbaker hive were less than one mile from mine.

There has not been a day that my bees have had a good flight since November. On New Year's Day they flew some, but not a good flight. I would like to know if the loss of bees was worse than common generally; or was the loss worse in just this part of the country? I would like to have some of the old bee-men tell, through the American Bee Journal, whether winter packing was of any use or not. I can not tell for my part, so I would like to hear from some one who knows. I think that bee-men ought to tell of their failures as well as their successes, as we learn some by the failures. W. S. Risler.

Hunterdon Co., N. J., March 17.

Wintered All Right.

I put 36 colonies of bees into the cellar Nov. 10, 1903, and took them out March 30, 1904. I did not weigh them, but they did not seem to have lost anything either in weight or in bees. They were all good. They did the humming to-day, but the apple-blossoms were not there. J. N. Shedenhelm.

Iowa Co., Iowa, April 6.

Experiences in Wintering.

My bees have wintered well. They have been on the summer stands without any packing; but this place is well protected, being surrounded by timber. I had five colonies last spring and increased to 12. But the honey crop was poor last season, owing to wet weather when alfalfa was in bloom. My bees are all alive at this time, and have plenty of stores. But some bee-keepers have not fared so well. One man with 40 colonies discovered late in November that he had not a bee, neither dead nor alive. A neighbor of his with 20 colonies had the same experience. Can any one explain this? My bees are all in 10-frame Langstroth hives.

I will not be without the Bee Journal as long as I have a colony of bees.

C. W. Morgareidge.

Sheridan Co., Wyo., April 5.

The Use of Separators.

I have just read Mr. Pagan's criticism of my off-hand talk about the use of separators in the production of comb honey, and I must confess that I like the way he talks. I did not mean to say that I'd not use separators in any case, for I can easily imagine a case where it would be absolutely necessary; as, for instance, in putting back unfinished sections; or, as he states, if the flow of nectar ceases. But you know that I keep but a few colonies, and devote much time to watching and manipulating them—weak colonies I strengthen, or set them to building brood-combs, or filling extracting-frames. Of course, were I manipulating a large number of colonies it would require additional help, or probably the introduction of separators. But, as I said in my first article, I have seldom used separators, and have produced 3000 pounds of comb honey, or more, and sold it at the highest market price, and have all I can produce the coming season engaged.

Wm. M. Whitney.

Walworth Co., Wis., April 7.

For Sale--APIARY STOCK

Includes 100 Chaff Hives, complete, in good order; 1 Extractor, Honey-Tanks, and everything necessary for the business. Also 20 colonies of Italian Bees, small house of 6 rooms—one of the best localities in Michigan. For further information, address,

MRS. WM. WRAY, Ashley, Mich.

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HONEY AND BEESWAX

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100 colonies of Italian and Carniolan **BEES** for sale; all in 8 and 9 frame hives—all nearly new—and bees all in good condition.

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8-Frame 1 1-2 STORY Hive for $1.

This hive is rabbetted at corners; is the best $1 hive made. No. 1 Sections, $4; No. 2, $3.50. Shipping-Cases, 12-lb., $8 per 100; 24-lb., $13; 20-lb. Danzy, $10; without glass, 50c less per 100. Dovetailed Hives, Foundation, Smokers, etc., **CHEAP.** Send for List.

W. D. Soper, R.D. 3. Jackson, Mich.

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A Standard-Bred Italian Queen-Bee Free!

For Sending One New Subscriber.

As has been our custom heretofore we offer to mail a fine, Untested Italian Queen to the person who complies with the following conditions, all of which must be strictly followed:

1. The sender of a new subscriber must have his or her own subscription **paid in advance** at least to the end of this year (1904).

2. Sending your own name with the $1.00 for the Bee Journal will not entitle you to a Queen as a premium. The sender must be already a paid-in-advance subscriber as above, and the new subscriber must be a **NEW** subscriber; which means, further, that the new subscriber has never had the Bee Journal regularly, or at least not for a whole year previous to his name being sent in as a new one; and, also, the new subscriber must not be a member of the same family where the Bee Journal is already being taken.

We think we have made the foregoing sufficiently plain so that no error need be made. Our Premium Queens are too valuable to throw away—they must be **earned** in a legitimate way. They are worth working for.

We will book the orders as they come in and the Queens will be mailed in May or June. Will you have one or more?

If you cannot get a new subscriber, and want one of these Queens, we will send the American Bee Journal a year and the Queen—both for only $1.50. Address,

GEORGE W. YORK & CO., CHICAGO, ILL

HONEY AND BEESWAX

MARKET QUOTATIONS

Chicago, April 7.—The market is heavily supplied with comb and extracted honey, neither of which are meeting with any demand, especially is this true of the comb. Prices are uncertain, as those having stock are anxious to sell it; therefore it is difficult to quote prices. The best grades of white comb bring 11@12c; anything off from choice to fancy is not wanted. Extracted, white, according to quality, sells at 6@7c; amber, 5@6c. Beeswax, 30@32c.

R. A. Burnett & Co.

Cincinnati, O., April 18.—The honey market continues to be dull; if anything, the prices on comb honey are lower; concessions are made on bigger lots. I quote: fancy white comb from 12½@14c. Sales on extracted are made at the following prices: Amber, in barrels, 5¼@5¾c; in cans, ½c more; alfalfa, water-white, 6@6½c; strictly white clover, for extra fancy, 7½@8c. Beeswax, 30c.

C. H. W. Weber.

Albany, N. Y., April 25.—Honey market is very dull. Stocks of both comb and extracted are lighter than we thought would be a month ago, when we thought we would have to carry over the season. The demand for honey here will be light until the new crop comes. Quotations are nominally—8@13c for comb, and 5@6c for extracted. H. R. Wright.

Philadelphia, April 18.—Never in the history of the comb honey market has there been such a lot of off-quality of comb honey shipped into this market so late in the season. We have sold some of our own honey in the last few days, good No. 1 as low as 6c a box, the same honey we were getting 14c for 60 days ago. It is the old story that when bee-men find the season is closing and they cannot get shut of the crop themselves, they send it to the commission-men to slaughter it at any price they can get. We quote: No. 1 comb, 10c; amber, 7@8c. Extracted, fancy white, 7½c; amber, 6c. Beeswax sells readily at 31c.

We are producers of honey and do not handle on commission. Wm. A. Selser.

Cincinnati, April 18.—The honey market here is reassuming activity, and judging from present indications, and the lateness of the season, the last season's crop will be consumed before the arrival of the new. Amber extracted in barrels and cans, 5½@6½c; white clover, 6½@8 cents, according to quality and package. Fancy comb honey sells at 12@15c. Beeswax, 30 cents. The Fred W. Muth Co.

Boston, April 9.—Prices remain same as before, which are as follows: White in glass-front cases at 16c; No. 1, at 15c. Supply is ample, and demand light at this time. Extracted, water-white, 8c; light amber, 7@8c; with but little call for dark Florida.

Blake, Scott & Lee.

Kansas City, April 18.—The demand for honey is a little better than it has been. Prices on strictly fancy comb are $2.50 per case, if not candied; the great trouble with the majority of honey coming from the West at present is that it is more or less candied, and about $2 00 to $2.25 is all we can get for it; amber is selling at $2.25 per case. Extracted is dull at 5@6c. Beeswax in good demand at 30c.

C. C. Clemons & Co.

New York, April 18.—There are no new features in the honey market. Some white honey is selling at from 12@13c; off grades at from 10@11c, and no demand for dark honey whatever. Market is very quiet on extracted of all grades, and prices are rather irregular. Beeswax very firm at 29@31c.

Hildreth & Segelken.

San Francisco, April 20.—White comb, 1-lb. sections, 11½@12c; amber, 8@10c. Extracted, white, 5¼@5¾c; light amber, 4¼@4½c; amber, 3¾@4¼c; dark amber, 3¼@3¾c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

There are no special changes to record in quotations, but the market lacks firmness, it being impossible to effect large transfers at full current figures. Both comb and extracted, mostly of medium grades, are offering in considerable quantity for this time of year.

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Manufactures and carries in stock every article a bee-keeper uses. BEES AND QUEENS IN SEASON.
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ST. LOUIS, 1904.

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Bees, Honey and Beeswax bought and sold for cash.

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We also handle the famous
Hoosier Incubators and Brooders.

C. M. Scott & Co.
1004 East Washington Street,
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ONE FARE FOR THE ROUND-TRIP plus 25 cents, to Cleveland, Ohio, and return, via Nickel Plate Road, May 16th, 17th and 18th. Tickets good going date of sale and returning to and including June 10, by depositing same.

Three through daily express trains to Ft. Wayne, Cleveland, Erie, Buffalo, New York, Boston and New England points, carrying vestibuled sleeping-cars. Meals served in Nickel Plate dining-cars, on American Club Meal plan, ranging in price from 35 cents to $1.00; also service a la carte. Chicago depot, La Salle and Van Buren Sts. No excess fare charged on any train on the Nickel Plate Road. Chicago City Ticket Offices, 111 Adams Street, and Auditorium Annex. 'Phone Central 2057. 3—15A5t

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Why does it sell so well? Because it has always given better satisfaction than any other. Because in 26 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

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OF ALL KINDS.

Langstroth on the Honey-Bee—Revised
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

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G. B. LEWIS COMPANY,

WATERTOWN, WIS., U.S.A.

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How to Find Queens. G. M. DOOLITTLE.

MASSACHUSETTS

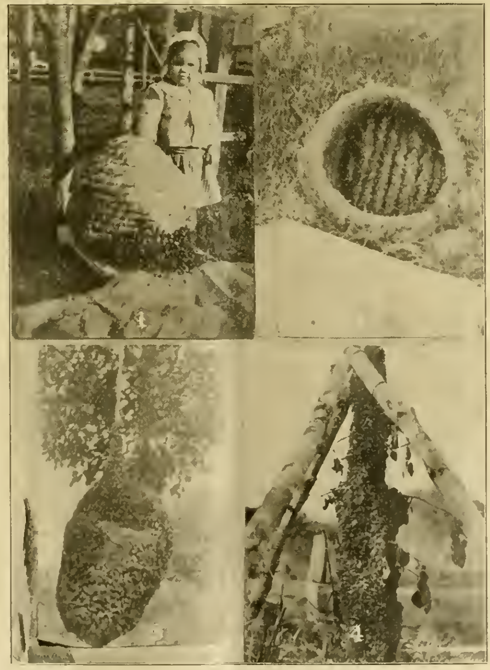
AMERICAN BEE JOURNAL

WEEKLY—$1.00 A YEAR.

Published by GEORGE W. YORK & CO., 334 Dearborn Street.

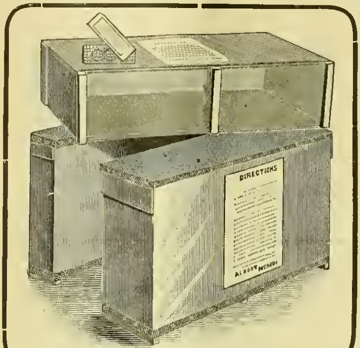
44th Year. CHICAGO, ILL., MAY 12, 1904. No. 19.

SOME PICTURES FROM ALLEN LATHAM.



1. May 11. Hiving a swarm that came from an observatory-hive colony.
2. The same swarm June 20.
3. A basket of bees.
4. Driven or shaken swarm awaiting hiving.—(See page 343.)

Have You Lost Your Bees?



SHIPPING BOXES FOR BEES.

Save Your Combs.

The winter losses in some parts of the country are heavy, and the demand for bees and queens will be large. Parties needing queens should send their orders at once, and state date when shipment is desired.

Early Italian Queens.

We are fortunate in being able to offer for April and May delivery a large stock of queens from our Southern breeders. While we have a much larger supply than ever before, it is highly important that you send your order at once to secure the queens when desired, as we will fill orders in rotation. We expect to be able to furnish untested queens from our Southern yards, in any number, after April 10th. Send your orders at once.

Prices of pure Italian Queens, untested, from our Southern yard for April and May shipment.

	1	12	50	100
Untested	$ 75	$ 8.50	$35.00	$ 65.00
Select Untested	1.00	11.50	47.50	77.50
Tested	1.50	17.00	70.00	130.00
Select Tested	2.50	28.50	——	——

Prices of Our Red-clover and Honey Queens.

Untested queen	$ 1 00	Select tested queen	$ 3 00
Select untested queen	1 25	Breeding queen	5 00
Tested queen	2 00	Select breeding queens	7 50
Extra select breeding queen, one year old			10 00

We book orders, and fill in rotation.

Imported Italian Queens.

We are prepared to furnish from the best breeders in Italy, imported Italian queens. They are put into our own yards and tested before sending out. We have only two grades—best, and fair imported, and prices are given in the table below.

Best imported queens	$5 00	Fair imported queens	$3 00

The Root Queen-rearing Outfit.

In this outfit are embraced the best points of the best systems in use. It will give satisfaction to the amateur as well as the expert. The cell-cups are made of wood, wax-coated. No melted wax is used in their manipulation, as they are attached to the cell-stick by means of a small nail-point.

The nursery-cage combines the features of nursery and introducing cages. By their use a queen can be released on the candy plan or caged in the hive as desired.

In connection with the outfit goes a booklet on queen-rearing—one which ought to put the veriest amateur on the high road to success. Outfit comprises three cell-bars with 50 waxed wooden cells, one frame of cages (18), one cell-forming stick, set grafting-tools, and a book on queen-rearing..................$4.50

If sent by mail, add 50c for postage.

Tools for Queen-breeders.

Wooden cell-cup with point for attaching to bar, 50c per 100; $4.00 per 1000.

Same, waxed ready for use, 75c per 100; $6.00 per 1000.

Titoff wire nursey-cages, 15c each; $1.35 per 10; $12 50 per 100.

Frame for holding 20 cages, including cages, $3.00.

Cell-stick, 10c each; $1.00 per dozen.

Transferring needle, double-ended and nickel-plated, 15c.

Jelly-spoon, nickel-plated, 15c each.

We can supply, also, fine-pointed lace-scissors with extra large bows, for clumsy fingers, at 35c each.

Nuclei and Colonies of Bees.

We are prepared to furnish one, two, and three-frame nuclei and full colonies of bees in eight-frame Dovetailed hives or Danzenbaker hives. The nuclei are put up in light shipping-boxes made of basswood, the sides of which are only $\frac{3}{16}$ inch thick, and the ends $\frac{1}{2}$ inch. The top and bottom are covered with wire cloth. This makes a very light package, affords plenty of ventilation, and is strong enough to stand shipping 500 to 1000 miles.

Any of our nuclei, even the 1-frame, will make good strong colonies by fall if properly handled. The three-frame if properly managed can be increased four, five, or even ten full colonies by fall if bought now; and instead of having any black bees, one will have in the beginning pure Italians of the choicest stock throughout his apiary.

PRICES OF NUCLEI.

One-frame nucleus without queen	$2 00
Two-frame " " "	3 00
Three-frame " " "	3 50
Full colony in 8-fr Dovetailed hive	7 50

We can furnish with the nuclei any queen mentioned in the table of prices of queens.

One-frame Nucleus--This contains a frame partly filled with brood and bees. The condition of the hives at different seasons f the year vary so that we can not always put up nuclei in the same way; but in every case we aim to give full value. Weight about 7 lbs.

Two-frame Nucleus--This is just the same as our one-frame nucleus, except it has twice the amount of bees or brood, or of both. The box is larger, and holds two frames—one full frame of brood, or two frames partly filled. Shipping weight, about 10 lbs.

Three-frame Nucleus--This is three times the size of the one-frame nucleus, and is made up in the same way as the one and two frame. Shipping weight, about 15 lbs.

A Full Colony will contain 8 Langstroth frames in Dovetailed one-story hive—three full frames of brood, or equivalent, in six combs, and enough bees to cover fairly all the combs. No queen is furnished at the table price. Purchaser is to seclect the queen and add her price to that of the bees. Our colonies are all put up in new Dovetailed or Danzenbaker hives, painted two coats. Shipping weight about 40 lbs.

Special Offer!

Gleanings in Bee Culture one year, and one untested Italian Queen from our Southern yards..........................**$1.00**

We begin shipping at once. Orders filled in rotation. Do not ask for special arrangements; at this low price we can't make exceptions.

Gleanings in Bee Culture one year, and one untested Red-clover Queen for **$1.50**

We begin shipping these queens about April 15. Orders filled in rotation.

Guarantee.

We agree to deliver queens in good order to any part of the United States or Canada, from April 15 to October. In case of queens valued at $5 or more, we ship in a one-frame nucleus, (no charge for nucleus). If a two-frame or three-frame nucleus is wanted, add to the price of the queen the difference in price between the one-frame and the two or three-frame. Losses must be reported on arrival.

We can make Shipments of Nuclei from

Cincinnati, Ohio, Philadelphia, Pa.,
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Wharton, Tex., High Hill, Mo.,
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This will give you very low Express Rates.

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Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

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GEORGE W. YORK, Editor. CHICAGO, ILL., MAY 12, 1904. Vol. XLIV—No. 19.

Editorial Comments

The Daily Use of Honey—"Pass It On."

For several years we have been contending that the National Bee-Keepers' Association should do something for bee-keeping in the line of advertising the use of honey, so as to increase the demand. But up to this time, so far as we can recall, nothing whatever has been done about it.

We don't like to be considered pestiferous, but, even at that risk, we do feel that the National could, if it would, do something worth while about increasing the general consumption of honey.

Since giving up the bee-supply business we have occasionally had a little "time to think"—"spells of thinking," we may say—and here is one of our "thinklets:"

Let the National offer a prize of say $25 for the best contribution of about 2000 words, on "Honey and Its More General Use as a Daily Food." Then let the Board of Directors be the judges, and after selecting the very best contribution, publish it in a small illustrated booklet form—say 8 pages, and about 3x5 inches—so as to slip into almost any ordinary envelope. At the top of the first page we would have in fairly large type, "Pass It On—After reading."

Our idea would be to have the National furnish these booklets to the bee-keepers at actual cost. They would be sent out with every letter that is mailed either by individual bee-keepers, honey-dealers, or by bee-supply dealers, queen-breeders, etc., and also handed out as occasion offered. Every one connected at all with bee-keeping or honey-selling should be glad to help in thus attempting to popularize the use of honey. By remailing such leaflets "after reading," they could be "kept going" until literally worn out.

We would have no special advertising matter on the leaflets whatever—simply all devoted to creating a demand for honey. Of course, there should be in small print at the bottom of the last page, "National Bee-Keepers' Association, Platteville, Wis." We would omit the General Manager's name, although using his post-office address, so that in case there were a change of General Manager, all that would be necessary would be to notify the postmaster at Platteville to forward all the National's mail that might be received there, to the new post-office. The General Manager's personality and own correspondence should not be mixed up with the work and business of the National. The National Bee-Keepers' Association and its business should be greater than any one man or his business.

We believe that the National Association can not do anything that would be more helpful to bee-keeping than to prepare for distribution such a booklet as we suggest. It ought to be done. It could be prepared in time to be of service in moving this season's crop of honey.

If our suggestion meets with the approval of the membership of the National, why not write to General Manager N. E. France, Platteville, Wis., who could take up the matter with the Board of Directors, and thus, if they deemed it wise, get started on the proposed booklet as soon as possible?

Why not?

No Great Harvest with Great Increase.

There seems to be in the minds of some beginners an idea that they can learn some way by which they can secure a large increase without in any way interfering with the harvest of surplus honey. It may be as well for them to learn plainly that the old proverb applies here, "You can't have your cake and eat it, too." As a rule, increase costs honey, and in most places the largest harvest can probably be obtained by having no increase whatever. The exception is in those places which have a very heavy fall flow; and in these places it may be advisable to increase as much as possible early in the season, trusting to the larger late harvest to be obtained by the larger number of colonies. Even in these places the largest possible harvest will be secured where there is no increase, provided the number of colonies at the start is sufficient fully to occupy the field.

Suppose a man has 50 colonies in the spring. He may increase these to 200 colonies, and by thus increasing them lose his chance of an early harvest; but if he has a heavy fall flow he may more than make it up with the increased number of colonies on the late crop. But he will do still better without any increase, *if* he has the 200 colonies to begin the season.

Teaching Bees to Steal.

Mr. S. T. Crim, of Sangamon Co., Ill., sends the following clipping taken from the Decatur Review, his only comment being, "Bee-keepers better look out:"

> "TRENTON, N. J., April 20.—Enoch P. Eppock, of Hunterdon County, has been held to await the action of the grand jury on a charge of having trained a flock of honey-bees to steal."

It seems that down in New Jersey they have flocks of honey-bees instead of colonies. It may be that this expression comes from their familiarity with the "flocks of mosquitoes" that we have read about as being very plentiful in that State. If we may judge from reports, their mosquitoes are on a par with birds, in size, and so it would be quite proper to speak of them as "flocks."

But just think what a wonderful trainer Mr. Eppock must be if he is successful in teaching bees to steal! And then to think of arresting this "Eppock"-making man for doing such a thing! It is unfortunate that some of us can not be members of that grand jury. It would be so "grand" to serve on it, and perhaps learn just how those honey-bees were taught to steal!

But let us not all hold our breath until we hear the decision of the jury, in this wonderful New Jersey case.

Care of Unoccupied Combs.

Losses were unusually heavy during the past winter and the following spring, and there will be more than the usual number of beginners inquiring whether the old combs left by the departed colonies can again be used. Most assuredly they can; and they should be carefully preserved. If left untouched on its summer stand throughout the season, a hive filled with such combs will be found by fall to be a mass of worms and cocoons.

The beginner is likely to say, "I'll fix that; I'll close the hive up so tight that no moth can get in, and if the moth can't get in to lay the eggs, there can be no worms hatched from them." But when he comes to open it in the fall, he finds it a solid mass of cocoons, with not an inch of comb left. The trouble is that the eggs are already in the hive—have been there all through the preceding winter.

If the combs are kept in a cool cellar, the worms will make very little headway compared with what they will accomplish out in the warm air. But as soon as the weather warms up, you can do nothing better than to give the combs into the care of the bees. Fill a hive-body with such combs, and put it under a strong colony, so that the bees will have to pass through this lower story in going in or out. After a few days, as the weather gets warmer, a second story of the combs may be put over this lower story, leaving the colony in the third story, and if the colony be strong a fourth story of combs may be put above the colony. Of course, these combs can not be left thus throughout the season, unless you are working for extracted honey, but they can be used as soon as needed for swarms, and a story of combs may be cared for by a colony too weak to work in sections. Even a quite weak colony will keep the moth at bay if the bees be Italians.

"Better than Honey for Less Money."

Thousands of dollars are being spent in putting before the public this lie about a preparation of glucose, and there's doubtless money in such advertising. What a pity the National Association can not have an equal amount of money to spend in advertising the *truth* about honey. And it could have the money if every bee-keeper would send in his dollar to become a member. The Association has done a lot of good with the small amount already at its disposal, and all get the benefit. It is hardly the fair thing for a few to pay all the expenses. If you have forgotten to send in your dollar till now, better send it at once. It can be sent either to General Manager N. E. France, Platteville, Wis., or to the office of the American Bee Journal.

Miscellaneous Items

Mr. and Mrs. A. Coppin, of Marshall Co., Ill., gave us a pleasant call last week, when on their return trip from attending the funeral of Mr. Coppin's brother at Hurley, Wis. Mr. Coppin had 200 colonies of bees last fall, but thinks he has lost about 50 of them in wintering. He was one of the comb-honey exhibitors at the Illinois State Fair last year, and had about the finest lot of honey we ever saw.

G. B. Lewis Co., the Wisconsin manufacturers of popular bee-supplies, wrote us April 23, as follows:

> "The outlook for a heavy honey season this year is very bright from our standpoint. We have never known, in all our experience as manufacturers of bee-supplies, such a rush as this."

It seems that the larger manufacturers of bee-keepers' supplies are unusually busy. We suppose that advising bee-keepers to make their own hives, etc., has not had anything special to do with the increased business of the manufacturers. But if it has had any influence at all, we doubt not that the manufacturers will hope that such advice may be continued to bee-keepers. Certainly they (the manufacturers) have no good reason for objecting to such advice being given if it results in their having a larger business than ever. While there may be a few bee-keepers that can save money by making their own bee-supplies, the greater majority seem to find that it is better for them to have factory-made goods.

A Plant-Introduction Garden.—The United States Department of Agriculture has decided to establish a Plant-Introduction Garden and Experiment Station at Chico, Calif. Contracts for the necessary land have been closed, and work has been begun on what will undoubtedly be the greatest institution of its kind in America, and perhaps in the world. A beginning will be made with 90 acres, but it is the intention of the Department to extend the area as the needs of the institution require. The garden will be devoted to experimental culture of the plants introduced from various parts of the world, and to a careful study of plant-life.

Such an institution has long been contemplated by the Agricultural Department. California was selected for its location on account of climatic conditions, which admit of the culture of tender plants from the tropics, and of northern products as well. The ideal location for such an institution is that which admits of the successful cultivation of the widest possible range of products, and the committee entrusted with the duty of selecting the site believe they have found it at Chico.

This committee was composed of Prof. P. H. Dorsett, Government Expert, who will have charge of the institution, and Prof. A. V. Stubenrauch, of the University of California, acting with Dr. A. J. Pieters, head of the division for seed and plant distribution. Messrs. Dorsett and Stubenrauch spent months in making a careful study of conditions affecting plant-life in various portions of the State, visiting and carefully inspecting each locality likely to prove available. The decision in favor of Chico was reached some time ago, but the site selected could not be secured, and so another tract had to be chosen, which has now been done, and the purchase consummated.

Chico is situated near the eastern border of the great Sacramento Valley, 75 miles north of Sacramento, the State Capital, and was the most northerly point considered by the committee. Climatic conditions in California are affected but little if at all by conditions of latitude, the orange, the lemon, and the olive being staple products of a district that measures fully 500 miles north and south.

Doubtless the managers of the new garden can be induced to experiment with nectar-yielding plants as well, and thus be of more value to bee-keepers.

Race for the First Ohio Inspectorship.—The bee-keepers of Hamilton Co., Ohio, are much elated over the success of the Hamilton County Bee-Keepers' Association in being instrumental in having a foul brood law placed on the statute books of the State.

It seems there are now two candidates in the field for the position of foul brood inspector—Henry Shafer, a prominent bee-keeper and president of the Hamilton County Bee-Keepers' Association, and Fred W. Muth. The latter has the endorsement and recommendation of the Association. Both candidates are capable and experienced bee-keepers, the latter being the son of the late Chas. F. Muth, whose name for years was a household word for honey and bee-supplies all over Ohio, and, in fact, over the entire United States.

The County Commissioners, who make the appointment, await the receipt of a certified copy of the law, after which, and before the lapse of five days, they must make the appointment. The result is awaited with interest. May the best man win.

Some Expert Opinion

"In the multitude of counsellors there is safety."—BIBLE.

Use of Queen-Excluding Honey-Boards.

If for some reason you were to start in anew to keep bees, and were obliged to get an entirely new outfit—

Ques. 9.—Would you use queen-excluding honey-boards? If so, why? If not, why?

N. E. FRANCE (Wis.)—Never did.

O. O. POPPLETON (Fla.)—No. I can not use them in my style of hive.

EUGENE SECOR (Iowa)—Yes, on newly-hived swarms; not on old colonies.

DR. J. P. H. BROWN (Ga.)—Not in my location, with my honey-pasturage.

GEO. W. BRODBECK (Calif.)—If conditions required restriction, yes; otherwise, no.

MRS. L. HARRISON (Ill.)—No; I never found the need of any. Not one cell of brood in a section of honey last year.

P. H. ELWOOD (N. Y.)—When extracting to keep the queen below, and sometimes when boxing on empty frames, if ever that is done.

R. L. TAYLOR (Mich.)—Yes. Because with it I always know where the brood and queen are—in the brood-chamber, and not in the sections.

C. DAVENPORT (Minn.)—I do not find them necessary for comb honey, but for extracted I can get more honey with less work by confining the queen to the lower story.

ADRIAN GETAZ (Tenn.)—No. A honey-board is a regular nuisance, anyway. All its advantages can be secured by using the right kind of supers and other fixtures.

G. W. DEMAREE (Ky.)—I have used the perforated-zinc queen-excluder for 15 or 20 years on hives prepared for the honey-extractor, and I look upon the device as one of the great modern improvements in bee-culture. In the production of comb honey I do not now use the queen-excluder, as I have not been troubled by the queen entering the surplus cases.

E. S. Lovesy (Utah)—I would not use queen-excluding honey-boards in running for extracted honey, because I can average more honey to the colony without them.

Prof. A. J. Cook (Calif.)—I would, unless the thick top-bars of my frames made it unnecessary. I would keep queens below. I have been very pleased with such honey-boards.

G. M. Doolittle (N. Y.)—For comb honey, no. Because there is not enough advantage gained by their use to overcome the disadvantage of cost, storage, and labor required.

L. Stachelhausen (Tex.)—I do not use queen-excluding honey-boards except for certain purposes. They are a hindrance for the bees, and reduce the honey crop more or less; in some cases considerable.

Dr. C. C. Miller (Ill.)—Not usually. It is so seldom that a queen goes up into the sections that it wouldn't pay for the cost and trouble of using. If working for extracted honey, I should use them to keep the queen down.

S. T. Pettit (Ont.)—Yes, for taking both extracted and comb. To keep both queen and drones out of the supers. And I predict all progressive bee-keepers will, in the near future, when they have studied the drone a little more closely.

J. M. Hambaugh (Calif.)—In running to extracting, no, for California, where our harvest lasts two, three, and sometimes four months, as it would dwarf the colony by restricting the queen. In running for comb honey I would use the queen-excluders.

Jas. A. Stone (Ill.)—I would only use queen-excluding boards when using brood-frames above for extracted honey. Because in producing comb honey for 35 years I can only call to mind one or two cases in which the queen has gone to the upper story.

Wm. Rohrig (Ariz.)—In the production of extracted honey, yes. With their use we are not bothered with brood in the extracting-combs. Years of experience have taught me that as much honey can be produced with their use as without, and with much less labor.

C. H. Dibbern (Ill.)—I would use the wood-zinc queen-excluding honey-boards. They keep the queen from laying eggs, and the bees from depositing pollen, in the sections. The bees, too, are not so inclined to use wax from old combs to seal the sections with, causing "travel-stain."

Mrs. J. M. Null (Mo.)—No. I think queen-excluding zinc ofttimes oversteps legitimate bounds—sort o' overdoes things; in short, gets quite too exclusive, inasmuch as not a few of the workers or "common people" of the hive are denied a free and unobstructed passage through its use.

C. P. Dadant (Ill.)—I might use them if the hive was small, and comb honey the product; but I would not use them for extracting, because when we extract it is of minor importance to keep the queen out of the super. With large brood-chambers the queen goes rarely into the supers, anyhow.

E. E. Hasty (Ohio)—For extracted honey, excluders ought to be compelled by law—shame that common-sense of decency does not compel them without. For comb, I'd start in without them, and add them afterward if experience showed that I must. Excluder fastened to the super without a separate board is my choice.

E. Whitcomb (Nebr.)—Yes. Either for comb or extracted honey I would use the queen-excluding honey-board. Good and prolific queens are too liable to get into the upper story, especially if we use the 8-frame hive. With the larger hives the queen is not apt to wander so far from home and to begin business in another county, as it were.

J. A. Green (Colo.)—Yes. Because the most profitable production of comb honey requires a contracted brood-chamber at times. Without a queen-excluder the queen will often go up into the sections. Besides, almost all of my colonies are, at one time or another during the season, run for extracted honey. This requires a queen-excluder, as I would not think of being bothered with brood in the extracting-combs.

R. C. Aikin (Colo.)—I would most certainly use queen-excluders with extracted-honey hives. If you do not, there will be altogether too much brood in the extra, and, worst of all, it will be there most likely when you want to extract. You can not get bees out of a chamber with brood as you can from honey only. Of all provoking things one of the worst is the brood-nest in an extracting super. I do sometimes put brood in a super, but when I put it there I know all about it, and do it at the right time—not so with a queen.

With the Langstroth hives run for comb honey use a slat honey-board. Its almost sole purpose is to catch the burr-combs that come up from brood-combs, and it will surely do it, and is necessary for that purpose. With shallow hives for comb honey, use a queen-excluder, because you will be almost sure to want to crowd hard, contracting the brood-chamber to get all the honey into the super, and sometimes you will want to put brood above a super for a few days; and will want to confine the queen to either the top or bottom of the brood-chamber. For these and other reasons use queen-excluders with divisible brood-chamber hives. Still, for comb honey alone, very good results may be had with the slat-board.

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

Contributed Articles

Extracting, Selling, and Liquefying Honey.

BY G. C. GREINER.

During the last few months our leading bee-periodicals have brought out many good points on the above subject. Still there is room—the subject is not exhausted yet. Our daily experience in that line offers frequently new features, so that, in adding another chapter, I may possibly mention some points that have not been touched before, or make some repetitions by the way of indorsement.

The remark, that the job is only half done when the honey crop is harvested, and that it requires fully as much sharp brain-work to do the selling in a profitable way, is not taken out of the air. In possession of a good apiary, and favored with a good honey locality, it is a comparatively easy task to produce a honey crop. There is very little difference in the general work. With the exception of some of our individual hobbies and notions, it is about the same in one place as in another—we all have to agree on this one point: Bees must be in proper condition to take advantage of the honey-flow.

But in selling our crop it is very different. We have to adapt ourselves to various circumstances. Some localities prefer comb honey mainly; others call for the extracted in liquid form, while still others will only be satisfied with the granulated in paper sacks. Then, again, the package itself has its certain patrons; some prefer to buy in large and other in small dishes, while another portion would rather have the tin or paper in preference to glass. To sum up, the secret of a flourishing honey-trade lies right here: We must produce and offer for sale such honey, and honey in such shape, as will draw the attention of our would-be customers and induce them to buy.

In following up the development of the paper-sack as a package for granulated honey. I am surprised to see how different people differ in their likes and dislikes. I could not sell one can of granulated where a dozen of liquid honey would find ready sale. I attribute this preference to the more attractive appearance of the latter—not the milky, partly granulated stuff—but the genuine, sparkling and glistening article, in which not a sign of any granule or any other impurity can be detected.

I am frequently asked the question: How do you manage to get your honey so clear and nice? Of course I always have to explain that all the trick to get clear honey is to draw it from the bottom of the tank. While this is an easy matter it is not so easy to keep it liquefied. I have not yet discovered the secret of keeping honey from granulating; I generally have to reliquefy once, which, if properly done, will keep it in that condition nearly all winter, or at least until it is sold. To make it all plain, which may be of some interest to the younger portion of our readers, I will give a short rehearsal of my extracted-honey management.

The object of running an apiary for extracted honey is not only to produce the honey, but to control swarming at the same time. A first-class article of well-ripened honey can only be taken from combs that are all, or nearly all, capped, and to guard against the swarming fever, plenty of store-room in the shape of empty combs must be accessible to a colony at all times during the honey-flows. An infringement on these two points will result in producing a more or less inferior grade of honey, and induce swarming when not desirable.

My honey-tanks are made of galvanized iron; they are 18 inches in diameter and 30 inches high, holding about 400 pounds each. I prefer that shape because a larger percentage of clear honey can be drawn from a high vessel than from a lower one of the same size.

When I begin extracting, I fill tank No. 1 to within three or four inches of the top, and cover up with a thin cloth. This keeps out dust and insects, and allows evaporation. If more extracting has to be done, I fill up the next, and if necessary the third in the same way, which gives the first one a chance to work itself clear. As soon as this has taken place, and whenever I have any leisure time, I begin to draw from this tank and fill up my retail packages, which

I aim to have on hand about that time, or, if I run short of these, I store in 60-pound square cans.

By the time I am crowded for more storage, my first tank is empty again, and by managing in this way I always have a place for honey that is being extracted, as well as a chance to draw clear honey from one or the other of the tanks. Honey so treated will retain its liquid condition during my early honey-trade, but with the advancing season it begins to thicken; its whitish appearance is the warning sign that granulation is taking place.

To restore it to its former condition, heating or reliquefying becomes necessary. But this is an easy job. For glass cans I use the shelf over our kitchen stove, which will accommodate about one dozen around the stove-pipe, and 24 hours of common firing for family use will generally melt it up so completely that not a particle of any granule is left. When it arrives at this condition (and this is necessary to prevent future granulation), I seal it up tight and store it away, and the chances are that it will remain liquid until it is sold.

I am not sure that it is necessary to loosen the top of the can when being melted, but as it gives the rubber a chance to expand to its natural shape, and the air a chance more readily to escape, I imagine that by loosening the top a very little (which I always do) it can be sealed up nearer air-tight when hot.

During the late fall and early winter I keep this kitchen-stove shelf occupied a good share of the time, but do not melt up much faster than I intend to use it on the road. If kept too long after liquefying, especially in cold weather, I think it will granulate again.

When melting up 60-pound cans, I set them in a large pan of water, on the back part of the stove, being careful not to heat the water above what the hand can bear. It takes about the same time—24 hours—to make honey run from the can. If it is not thoroughly liquefied when filling my retail cans, I pay no attention to that, but let the latter take a turn on the shelf to finish the job.

Niagara Co., N. Y.

Queen-Right Colony—How to Find Queens.

BY G. M. DOOLITTLE.

A CORRESPONDENT writes me thus: "I see that you sometimes answer questions through the columns of the American Bee Journal, and I have one or two I wish you would answer that way. Last summer I hunted a colony all over several times to find a queen, and, finding none, concluded that they were queenless; therefore I sent for a queen for them, procuring a fine one. I tried to introduce her, according to directions accompanying the shipping-cage, and the bees killed her. Upon looking into the hive later on I found brood, so I suppose they had a queen all the time. Will you please tell me how I may know for a certainty whether a colony has a queen? and also how to find the queen if a colony has one?"

To know if there is a queen in the hive, inspect the combs, and if no eggs or small larvæ are found in the bottom of any of the cells during April, May, June, July, August or September, you may reasonably expect that such a colony is queenless, except at a period of from 20 to 30 days after the issue of a first or prime swarm from any colony, with which swarm goes the old mother-queen, and it takes about the time named for any of the young queens left in the queen-cells to get to laying in the parent hive. Then, if you find, when looking, that the eggs are few and scattered about, with vacant cells intervening, and without any regularity, the queen in such a colony is not as prolific nor as good as she should be, and it is the part of wisdom to hunt her up, kill her, and put a good queen in her place.

But, to be absolutely sure that any colony is queenless in which you find no eggs or brood of any kind (and you should be thus *sure* before you try to introduce a valuable queen), take a frame of comb having eggs and little larvæ in it, from another colony, and put it into the center of the supposed queenless colony, leaving it there undisturbed for three days. If queenless, queen-cells will be formed over some of the larvæ, and if no such cells are started you can rest assured that they have something they are cherishing as a queen, which always makes it unsafe to try to introduce another until such a "something" is disposed of; for any queen which you may try to introduce will almost certainly be killed while there is something in the colony the bees are reverencing as a queen. If the bees start cells on this brood given, then you may know that they are ready for a queen; and if you take this frame of brood away when you are ready to put in the queen, you can be almost reasonably certain she will be accepted, if you use *any* of the plans given for introducing a queen.

Now about finding queens: To the accustomed eye of the practical apiarist, prolific queens are easily found, especially if the bees are of the Italian race; but a virgin queen, or something the bees may be reverencing as a queen, is often very hard to find, even by an expert.

To find any queen, the best time to look is from 11 a.m. to 2 p.m., as at that time the most bees will be out of the hive in the field, or taking their first outing, when they will be out of the way. If your hives face south, as they should, if your location will so allow, the sun will shine more or less down between the combs, and the light, thus striking them, will show you the queen much better than at any other time of the day. If the time of looking is before noon, you should sit or stand on the east side of the hive, facing west, and if at noon, sit on the other side, facing east, so that the sun shall not shine on your face or bee-veil; and, also, so that you will be looking on the side of the combs where the rays of the sun strike.

Always carry a light box with you, the same being two or three inches wider than your hive; and when opening the hive, do it as carefully and with as little smoke as possible; for if you use too much smoke, or are careless, and jar the hive much in opening, the bees and queen may become excited and run about much to your disadvantage, even if the queen does not leave her "egg-laying place" and go into the corners of the hive; and if you should smoke the bees too much, those of the hybrid and black variety will often so "stampede" about the combs or out of the hive that your object will be thwarted at the outset.

Having opened the hive so carefully that the bees hardly know that they have been disturbed, and as carefully removed the first frame on the side of the hive next to you, look over it for a queen, if there are enough bees on it so she might be there. Having satisfied yourself that the queen is not on this frame, set the same on the *further* side of the box from you, this box having been placed in a convenient position before you open the hive. Now take out the next frame from the hive, looking it over and setting it in the box next the first frame, if the queen is not found. You now have room so you can readily look down into the hive; and on taking out the next frame, immediately glance down the side of the fourth frame (now in the hive), when the queen will be seen, if she is on the "face" side of that comb, in her attempt to run around to the opposite or dark side of the comb, especially if she is a virgin or a black or hybrid, for such queens generally commence to try to get away from the bright sunlight just as soon as it strikes them, and in running around the comb your eye "picks them up" almost instantly. If you do not see her, immediately hold the comb you have in your hands, so that the sun may strike the opposite side of it, or what was the dark side of this comb as it set in the hive, for the queen will be on one of these dark sides if anywhere.

In this way keep on till she is found, or all the frames are in the box.

Twenty-four times out of 25 I find the queen in going through a hive like this, no matter what the queen, and whether laying or otherwise, and, if in the prolific part of the season, I do not have to lift over two or three frames to find her, if I keep in mind about where she will naturally be, as I will soon give. But should the queen not be found I now commence putting the combs back in the hive, and by putting them in the box the way I have told you, I can look at the "dark sides" of the combs as they come out of the box (and to a better advantage, as the box is so much wider than the hive that I can commence to look in this way with the first comb taken out), the same as I did in taking them from the hive, and it is a very rare thing indeed that I fail entirely to find any queen in looking over the combs either from the hive or the box. If such a thing as a failure should occur, the hive is closed, and a trial is made some other day.

And now a word about finding prolific queens when they are laying at a good, fair rate every day. Look for her between the hours of 9 a.m. and 3 p.m. on one of the two outside combs of the brood-nest, for during these hours she will nearly always be found on one of these two combs, while earlier in the morning, or later in the afternoon, she is apt to be nearer the center of the brood-nest. Keeping this in mind I generally look down between the combs, so as to tell by the bees that are clustered between the ranges of comb, about how far the brood comes on either side of the hive, when I take out the comb I conclude has the first brood in it on the side next to me, and if the queen is not on that comb, then I immediately take out the one on the further side of the hive, which I have concluded is the last one having brood in it in that direction. And in nine times out of ten I find the queen on one of these two combs, if I do not miss in my calculations as to how far the brood extends. That is, providing the combs have not been meddled with as to changing their places during the preceding 10 days. If an empty comb has been placed in the brood-nest a day or two previous, the queen will be quite likely to be found on this comb; but in such a case the brood-nest would not be in a normal condition.

Onondaga Co., N. Y.

Some Pointers—Blacks and Italians, Etc.

BY ALLEN LATHAM.

On page 839 (1903), Question 10 of "Ohio's" is an unsolicited testimonial in favor of "blacks." The neighbor's bees are blacks and do not swarm, while Ohio's bees are Italians and do swarm. This is not an isolated instance. When Italian-blind bee-keepers are able to see the good qualities which blacks prossess credit will be given where credit is due.

Why is it that blacks have a reputation for idleness, crossness, and general unprofitableness? It seems scarcely likely that it is a baseless reputation for the reason that it is so general. It is hardly logical to ascribe it to an instinctive feeling that a black race must *per se* be inferior. I do not assert that I know the cause, but will offer a suggestion as to a possible cause.

Before the Italians were introduced, and for some years later, it was the custom to "take up bees" in the fall. I never have seen this practiced, but have gathered from various sources that it was a general rule to "take up" the heaviest colonies. If this is true, it must follow that the lighter colonies were left to perpetuate the race. It is reasonable to suppose that the lighter colonies had queens inferior to the queens of the colonies "taken up." This custom prevailed for many years and must perforce have tended to deteriorate the race.

There may have been more thoughtful farmers who practiced taking up their lighter colonies, and those which seemed least fitted for survival, but it is likely that the majority let their desire for immediate gain overrule their judgment, and took up the very colonies which in the end would have paid them better by being left to live.

I know not how the Italian bee was treated previous to the last 50 years, but since that time it has surely been given a much fairer opportunity to show its value than has the black.

I hope before it is too late—before the black bee is hopelessly mongrelized by the Italian—that means will be taken to keep the race intact and pure. There are qualities of great worth in the black bee which it would take many generations to breed into the Italian.

Allow me to name a few of these qualities: Black bees enter sections readily. They cap combs white. They leave fewer light-weight sections. They husband their stores in time of scarcity. They are less prone to swarm.

Those who denounce the black bees have probably had poor and deteriorated strains; while I have never yet had Italians which would do as well as they are advertised to do.

MOVABLE-COMB HIVE.

That the regular movable-comb hive is not fitted for general use by farmers is a fact which is easy to demonstrate. But that they must go back to the old box-hive does not follow. The hive for farmers is a cheap double-walled hive, with movable but closed-end frames. This hive is a good winterer, and when necessity arises allows the removal of the combs. I am now making such a hive for my own use, and may later write an article describing the same. Only the bee-keeper who makes bee-keeping his business can use a hive which needs such care as the regular Langstroth calls for.

DRIVEN SWARMS THAT RUN AWAY.

Driven swarms sometimes run away, when not properly driven. I have not yet lost a swarm by my method of driving, and so venture to offer it here. Three sticks about six feet long are tied together at one end, then spread apart and set up as a tripod. There is then tied to the top a branch suitable for a swarm to cluster on. The colony to be driven is set aside and the tripod placed over the old stand. The bees are then shaken out by the old stand, old and young. After an hour or so the bees will all be clustered like a natural swarm upon the branch and should be left thus for about half a day. They may then be hived anywhere and will stay as well as a natural swarm, and will work nearly if not quite as well. The old hive is placed either back upon its old stand or elsewhere, and a queen with half a pound of bees run into it. This method takes a little more time than the others do, but it is better than to have swarms abscond. [See No. 4 in the picture on the front page.]

CLIPPING THE QUEENS.

Thinking that I might be mistaken about clipping the queens, I essayed once more. I clipped all my queens. If I ever do it again it will be when the memory of the results are very, very dim. To lose one's best queens by swarms issuing and queens going into the other hives or being lost in the grass is too much for my blood. Let those clip their queens who wish to do so, but let all who have not had experience do it gingerly.

THE BATH FOR INTRODUCING QUEENS.

"Drowning a queen" to introduce her, like all other methods, will not work every time. It is however a simple and easy method, and safe for the introduction of all but our most valuable queens. For such queen a safer method should be adopted, and one which is not so suggestive of possible harm to the queen. That the bee is cold-blooded is not a sure guarantee that a bath of that nature will be followed by no deleterious effects.

SCOUTS PRECEDING THE SWARM.

Do bees send out scouts before the swarm issues? Yes, they do. I saw it done last summer. I dusted the bees which were about the old-hive (empty) with flour, and saw these floury bees enter a colony which did not swarm for nearly a week.

THE TOPLESS BEE-TENT.

I have made further use of the topless bee-tent the past season, and find it a sure thing. It is so easily made that every bee-keeper should have one. Buy a piece of mosquito-bar eight yards long by two wide. It will cost 50 cents. Select four straight sticks, or bean-poles, and sharpen one end. Set the four poles up about the hive and suspend the unrolled netting like a curtain all about the poles. It is quickly set up and quickly taken down, and works perfectly.

STRONGER CASES FOR CANNED HONEY.

While we are urging the use of new cans for honey, let the matter of stronger cases be brought up. I recently had a lot of honey come, and out of ten cases only one was intact. That one had the middle section in it. The others were without this partition, and were nailed very insecurely. It is exasperating to get a lot of honey broken and leaking. The railroads will continue to employ cheap help, and the cases will continue to get rough handling. The only remedy is stronger cases.

GROUND CORK FOR WINTER-PACKING.

Ground cork is good for winter packing, but must be used with greater care than sawdust or shavings. If there is the least crack or hole the cork will continue to sprinkle through down into the hive or over the entrance, making itself a general nuisance. See that the winter-case fits the hive closely.

USING HONEY TO PUT UP FRUIT.

In putting up fruit with honey, go slowly. Honey takes in water and will rob the fruit of its water, with the result that the can of fruit and honey becomes a mixture of tasteless fruit and watery honey.

MELTING HONEY IN THE COMB.

If honey in the comb is melted up for the purpose of separating the honey from the wax, or for liquefying partly candied comb honey, avoid stirring the mass. Hot honey and melted wax appear to unite partly, with the result that a spongy mixture of wax and honey will rise to the top of the honey when cold instead of a cake of wax.

RENDERING WAX ON THE STOVE.

This is the season when many bee-keepers get together all the broken and odd bits of comb and extract the wax. A dish of water and hot wax on the stove is a source of imminent danger. At one time I got back to the stove just in season to see a column of fire as large as a barrel mounting to the ceiling. I managed to remove the dish of wax at the expense of trousers and shoes. At other times I have met with more or less severe disaster. Let it be a rule to keep next the stove as long as the dish of wax is where it can possibly boil over.

STRAINING WAX.

I find this a good method for straining wax: Tie a cloth over an empty 5-gallon can from which the top has been removed. Pour in a quart or so of water and bring to a boil. While the cloth is kept hot by the steam the wax is easily strained through. New London Co., Conn.

"Do Drones Keep the Hive Warm?"

BY DR. C. C. MILLER.

> I notice that Mr. Hasty criticises my position on the drone question. He says: "It is not quite *always* that we have the warming presence of the drones answered by the workers just as well. The first night after swarming finds workers reared in the drones' place mostly all gone, while most of the drones are where they are needed."
>
> There are no rules without exception, and I will grant that *if* a swarm happens to issue on a certain day, and the weather changes suddenly that same day from hot to cool, the drones, if they have not gone in part with the swarms, may prove a little help for a night. After the first night there are enough young bees hatched out to keep up all necessary heat.—C. P. DADANT.

I find the above clippingin a number of the British Bee Journal several month old, copied from a still older number of the American Bee Journal. Of course I read it at the time of its original publication, but it seems not to have occurred to me that two able men were a bit astray in their reasoning. That shows we do not get all the good out of our journals on first reading, especially if that reading be done in the midst of a heavy honey-flow.

I don't believe Mr. Hasty's afterthinker was in the very best order when he wrote that paragraph, and the Illinois Frenchmen was somewhat hasty in conceding the point. *If* the statement be correct, the logical inference is that where natural swarming is permitted, each colony should be allowed a certain amount of drone-comb so that enough drones will be in the parent hive to make sure that the brood shall be kept warm enough. Mr. Dadant can figure up what that would cost—and, also, what it would come to.

If there is any argument in the case it is this: When a swarm issues, a number of workers is detailed sufficient to take care of the remaining brood in ordinary weather; but if the first night should be unusually cool such detail is insufficient for the work, and an additional force of drones will aid to prevent the brood from chilling.

That, you will see, assumes that the detail of remaining workers will be the same whether drones are present or not; in other words, that the drones are not counted. Is such assumption a reasonable one? What proof for it? Is it not more reasonable to suppose that when the detail is made, whether it be by considering the sparseness of the bees upon the combs, or by some mysterious method of counting the number of bees present, that the drones are counted just as much as the workers? If that be the case, then the drones simply take the place of so many workers, and their further lives are a dead loss to the community.

If either of the gentlemen have any proof that as many workers will be left with a pint of drones as with none, I shall gladly yield the point. McHenry Co., Ill.

Something in Favor of Home-Made Hives.

BY AN "AVERAGE BEE-KEEPER."

THE advance in the price of hives and supplies has brought a great many bee-keepers to think of making their own hives. Of course, some are so located that they cannot well afford to make or have made for them their own hives. But a great many are located also where lumber is not yet so scarce as to be prohibitive in price for making hives. Where lumber is less than $50 or $60 per 1000 feet it would seem that there is inducement enough to manufacture one's own hives.

If we are to go by what certain so-called text-books tell us, the writers of which are in the supply-manufacturing business, of course, then it would be sheer folly for any one to attempt making his own hives, unless he is a trained carpenter. The "average bee-keeper" is there also paid the compliment that he understands nothing of making hives, and is told that he would better not try to find out. At times, also, there appear in the bee-papers stories of how some one or other attempted to make his own hives and almost cut himself to pieces; that the price paid for the lumber was so high that the cost of the hives was much greater than if ready-made hives had been bought, not even counting the time spent in making them; and so on, *ad infinitum* and *ad nauseum*. The gentle reader is left to deduct that the picture given is that of the "average bee-keeper"—another compliment to that large class. Such stories remind one, for all the world, of the advertisements we used to see labeled, "Before Taking" and "After Taking." Only here the label is changed to read: "Before and after buying ready-made hives."

In this way one side of the question is held up and the other side is repressed, for who ever saw a plea for home-made hives in a bee-paper whose editors were engaged in the bee-supply business.

To the "average bee-keeper" who is increasing his stock of bees and is in need of hives, the question of buying or making hives is one of importance. Then, also, there is the bee-keeper who wishes to be up-to-date. He has been told that the only hive for comb honey is the 8-frame "dovetailed" hive. That word "dovetailed" has been used as a good catch-word, by-the-way. Suddenly it is discovered that he must use another hive in order to be up-to-date. To him this question is also important.

Now, the great majority of bee-keepers are so located that they can procure lumber at a reasonable price. They are also located where they can have their lumber sawed to measure, and sawed at a reasonable price for the work. The hives so made are not likely to be quite as fancy—not sawed quite so smoothly—as the supply dealer's hives, but they are just as serviceable, when made with ordinary care. And the first requirement of a good hive is that it should be serviceable, no matter how pretty it may be made. A plain case, well joined, with the corners halved and nailed both ways, makes as serviceable a hive as the highest-priced hive ever made.

Some of the statements on the subject of home-made hives have been of a character to lead the "average bee-keeper" to doubt the truthfulness and sincerity of the writer. Bremer Co., Iowa.

Convention Proceedings

Report of the North Texas Convention.

The 26th annual meeting of the North Texas Bee-Keepers' Association was held at Blossom, Tex., April 7. Louis H. Scholl, apiarist and assistant entomologist at the Texas Agricultural and Mechanical College, delivered a lecture on foul brood among bees. The last legislature passed an act creating the office of foul brood inspector, under which Mr. Scholl was appointed, but failed to make any provision to defray the expenses of the office. The convention appointed a committee to wait upon the governor, and induce him to make an allowance from the deficiency fund to carry on the work. It was decided to make an exhibit at the St. Louis World's Fair in September, W. H. White and J. M. Hagood being appointed to prepare the exhibit.

Officers of the Association for the ensuing year were elected as follows: President, J. M. Hagood; vice-presidents, W. H. White and M. R. Graham; secretary and treasurer, J. N. Hunter, of Lake Creek. Blossom was selected as the next place of meeting, the time being the first week in April, 1905.

The Pennsylvania State Association.

We formed a bee-keepers' association for the State of Pennsylvania, April 12. The officers and committees are as follows:

President, H. A. Surface, a professor from the State College of Pennsylvania; vice-president, E. E. Pressler; secretary, Rev. L. D. Woods, of Muncy; and treasurer, E. L. Pratt.

Executive Committee, Richard D. Barclay, Chas. N.

Green, E. F. Phillips, E. A. Dempwolf, and John D. Costello.

Committees on Coustitution and By-Laws, E. E. Pressler, W. P. Merrill, Mr. Fuller, and H. S. Ferry.

After the election of officers and committees, we were entertained by Prof. Frank Benton, of the Department of Agriculture at Washington; also a very interesting description of foul brood, and how to remedy the same, by Mr. Chas. Stewart, a New York State bee-inspector who is very desirous that Pennsylvania should have a foul brood law, and their inspectors work in harmony with the New York State inspectors.

In the evening the public were invited, and we all listened to a lecture from Prof. Frank Benton, accompanied by stereopticon views; and also to a lecture from Mr. Chas. Stewart. As a whole, both afternoon and evening were a remarkable success. There was a large attendance, equal to the capacity of the hall, all anxious to contribute for their dues, and receive a receipt and card of membership. The bee-keepers' association of Pennsylvania has started out with a very brilliant prospect. H. S. Ferry.

Westchester Co., N. Y.

[We are glad to record the formation of another State bee-keepers' association. Some of these days all the States will have them. Then if all are affiliated with the National, the interests of bee-keepers will be better safe-guarded, and necessary legislation will be more easily obtained.

Success to the new Pennsylvania organization. Every bee-keeper in that State should hasten to become a member, with the understanding that some provision is to be made so that the dues paid shall also include membership in the National Bee-Keepers' Association.—Editor.]

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Mr. Hasty and the Sisters.

Some concern seems to be awakened in the minds of the brethren as to the apparel of the sisters and the proper sort of language to be used when speaking of them. Brother Hasty has fears that without a certain amount of "brotherly criticism" that apparel may become preposterously preposterous. Brother Hasty may as well understand first as last that there are some things beyond his understanding. No one can accuse the brethren of unfaithfulness in criticising woman's dress through many past years, and pray what difference has it made? The mysteries of woman's dress is a thing beyond their ken. Mr. Hasty's horse has little appreciation of the matter when his master is discussing whether it is better to use starters or full sheets of foundation, and as little appreciation has that master when in his presence is discussed the important point as to whether a shirt-waist should be trimmed with embroidery or feather-stitched. But he is to be pitied rather than blamed. What a dull time he must have of it, with nothing more interesting to gossip about with his neighbor than the presidential election, while the women-folks have such weighty matters to discuss as whether crepe de Chine or checked louisine will make up with the prettier effect.

But when it comes to the use of language, we sisters have entire faith in Mr. Hasty. A man who so uniformly shows himself filled with kndly thoughts and feelings will not be misunderstood whether he speaks of us as "dear creatures" or "preposterous critters." Indeed, we feel only honored that so good a man should concern himself about us at all.

Spring Care of Bees—Other Hints.

Such a cold, cold spring. April 30, and scarcely a day that the bees have been able to work as yet. Looks as if they were going to have a hard time of it, if the weather man does not agree to give us some good weather soon. I am beginning to think the problem of how to get bees safely through our trying springs is a much more difficult one than how to get them safely through the winter. If the colonies were all equally vigorous and strong it would be plain sailing; or if the weather would permit working with them it would not be so discouraging; but when you know they need your help, and the weather says hands off—well, it is not the "poetry of bee-keeping," to say the least. But patience; good weather will come some day, and in the meantime the most we can do for the bees is to see that they have plenty of stores, and keep them closed up as warm as possible.

A very small hive-entrance will do these days. Contracting the entrance serves a twofold purpose—keeps the bees warm, and helps them to defend themselves against robber-bees. For you may be sure that every colony will be thoroughly tested as to its ability to defend itself, and the more space it has to defend the less chance for its life.

Now is a pretty good time to get everything ready in the way of supplies, if you have not already done so, for the coming harvest. Don't wait until the last minute to order hives, sections, comb foundation, etc., and then blame the supply dealers if you don't get them on time.

Last summer I really felt sorry for people that came to us begging for supplies that we could not give them. Every few days some one would come in trouble—no hives—no sections—bees swarming and nothing to hive them in, everything crowded with honey, and nothing more to give them—all because they did not take time by the forelock. Order ahead, order enough—and what you don't use this year will be all right for next year.

Honey for Health and Beauty.

The following item appears in the "Health and Beauty" column of the Chicago Record-Herald:

"Honey is a valuable medicine, and has many uses. It is excellent in most lung and throat affections, and is often used with great benefit in place of cod-liver oil. Occasionally there is a person with whom it does not agree, but most people can learn to use it with beneficial results. Children who have natural appetites generally prefer it to butter. Honey is a laxative and sedative, and in diseases of the bladder and kidneys it is an excellent remedy."

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Honey Granulating in the Hive.

Will pure honey in combs granulate in the hive? South Dakota.

Answer.—Yes. Some honey is very troublesome in that way, according to cases reported.

Corn Syrup for Spring Feeding.

Would corn syrup be good for feeding up bees in the spring? Wisconsin.

Answer.—No, but it will probably do no harm to feed it when bees are flying freely every day, *if they will take it.*

Entrance-Guards—What Caused the Queen's Death?

1. Are entrance-guards to prevent swarming, or will they serve that purpose?

2. Sunday morning, April 17, I found a red clover queen dead in front of her hive. She was introduced last fall. On opening the hive I found it full of brood. The day being rather cold I did not look for a queen in the hive. What do you think was the cause of her death? Missouri.

Answers.—1. They do not have any effect in swarming; merely hold the queen when the swarm issues.

2. Hard to tell. Possibly on a previous day you had opened the hive and frightened the bees in such a way that they balled their queen and held her balled till she died.

Building a Bee-Cellar—Winter Breeding.

I wish to build a bee-cellar to hold 200 colonies. I intend to build it in a side hill and have it entirely under ground, and cover it with a roof, then 3 feet of earth, then a roof over this to keep the earth dry.

1. How large would you build it?

2. Would you make any special arrangements for ventilation? If so, how would you arrange the ventilators? The sides and end will be built of stone and mortar.

3. What causes bees to breed in the winter? NEW YORK.

ANSWERS. 1. Ten cubic feet for each colony is not far out of the way.

2. G. M. Doolittle is probably the most successful winterer in that kind of respository, and if I am not mistaken he has given up the use of ventilators entirely. It might be a good plan for you to have a ventilator, because it is easy to provide one when building, and not so easy afterward; and if you find you are better off without it you need not use it. T. F. Bingham has a repository not so entirely underground, and he believes in a ventilator 16 inches square. A plain board pipe from near the ground up will answer.

3. Probably heat and excitement.

How to Get Increase.

I have 7 colonies of bees, and am anxious to increase to 21 colonies, at least. I want them to be strong enough to store honey just as if they were first swarms. I have read of several ways to increase, but I am lost as to which way to follow. How can I make each of the 7 produce 2 strong colonies, that will be strong enough to store honey in the sections as a good, strong, early swarm would do, and yet have the parent colony strong, too?

I have been feeding each colony; they seem to be strong and doing well. My new hives are made, and all is ready to begin with, if I knew what to do. I have a good range here, alsike clover, sweet clover, and white clover is abundant. I am near a river, and there are lots of wild flowers early and late, that the bees work on.

INDIANA.

ANSWER.—I have read your letter twice carefully, and if I understand it correctly, you want from each colony two swarms, each as a strong prime swarm, leaving the parent colony still strong. I don't know how to do that, and if any one knows enough to help us out, I shall be glad to learn with you how it is done.

Caring for Moldy Combs.

I have 8 colonies of bees left out of 25. I put 11 into the cellar, which had water in it; 7 out of the 11 are all right. I lost all but one of those left out-of-doors. Some of them died from what seemed to be dysentery, and the combs are in bad shape. Will it do to place those hives, that have bees in them, under others and let the bees clean them out and get what honey is there? Some of the combs are very moldy and smell badly, but I think the odor comes from the dead bees.

ILLINOIS.

ANSWER.—Yes, it will be all right.

Vicious Bees—Wants Gentle Ones.

What shall I do with vicious bees? I think I wrote to you about this once before. I have the very meanest bees of all, I suppose. They beat yellow jackets and hornets all hollow. The queens were all bought of reputable breeders, too. My neighbors have bees from the same breeders that are not vicious at all. Smoke has little effect on them. When I open a hive they literally swarm out and all over me. I grin and endure it, but would like to know how, or where, to get a more gentle strain of bees. SOUTH CAROLINA.

ANSWER.—The only cure, probably, is a change of queens. Occasionally I have a colony that is specially vicious, and the queen has her head removed. If your neighbor got gentle stock from the same place as yours, you might be equally successful next time; and no matter where you got different stock, the probability is that there would be an improvement in disposition.

Spring Feeding—Smoking Bees—Borax for Ants—Clipping Queens.

1. Is it necessary to see about feeding the bees after they have commenced carrying in pollen? Mine are working hard.

2. At what time do you consider it necessary to use the smoker? Do you think too much strong smoke is injurious to brood and queen? I prefer using brush and veil as much as possible. I am stocking up with red clover and selected Italians. Are not these the most gentle bees we have?

3. How many colonies would you figure on to an acre of buckwheat to gather all the honey to good advantage?

4. I have some sections, and four fit to a frame very snugly in the top of a frame for feeding in the brood-chamber. Will it be all right to leave them in there, as the combs are in fine shape?

5. What is the best plan to get bees out of a super when ready to take off? And, do you always keep all the empty sections at the top?

6. Powdered borax sprinkled around on the ground is good to keep away ants. Do you think this would be detrimental in any way to the bees; that is, placing the borax on the ground?

7. I have a valuable queen, and wish to clip one of her wings. When would you do this? and how would you manage the colony when she casts her first swarm? Would you clip the wings of the following virgin queens, or do you think they would leave when they swarm?

8. My hybrid colony No. 1 began working hard about April 21 with a red clover queen. About when can I look for her progeny as workers? or will she cast a swarm before her progeny begin work?

MISSOURI.

ANSWERS.—1. One June, at a time when the bees ought to have been busy in supers, I found them carrying out the white remains of brood, and you may believe I moved pretty lively until every colony was safe against starvation for at least a number of days. In at least a locality no richer than mine, there is need of constant watch any time when bees are not busy storing. Especially is this so in spring and early summer, when the bees are using stores heavily for rearing brood.

2. If I were keeping bees *merely* for the fun of it, I might handle them without any smoker at all, and with very gentle ones it may never be absolutely necessary. Aside from quieting the bees, no good can certainly come from blowing into a hive, and no more should be used than necessary. But as a matter of actual practice I generally give a puff of smoke at the entrance before opening each hive, and a little over the top as the cover is removed. I can hardly afford the time to go slowly enough without any smoke. Bees are like folks—they differ in disposition. Italians bees are very gentle in general, but there are exceptions. As a whole, they probably do not excel the Carniolans in gentleness.

3. I wish I could tell you; but I never expect to know. If I remember rightly, M. Quinby, about 50 years ago, estimated that an acre of buckwheat yielded about 25 pounds of honey in a day. If that be correct, two or three colonies ought to be able to take care of it.

4. Yes, if you don't object to the small amount of room taken up by the wood.

5. Use a Porter escape if convenient to leave over night; otherwise the Miller cone escape. Empty sections are usually added at the bottom, unless it is doubtful as to their being needed.

6. Not at all.

7. Clip her the first time you see her when the bees are busy gathering. When the colony swarms, pick up the queen, put an empty hive in place of the old one, and when the swarm begins to enter the new hive on its return let the queen run in with the rest. *Never* clip a virgin queen. If you clip her before she is fecundated, you will never have anything but drones from her.

8. You may expect her progeny to be at work in the fields when about 16 days old, or about 37 days after she begins to lay.

Wants Increase, Not Surplus Honey.

I lost over half of my colonies of bees the past winter. I have about 50 Simplicity hives, with about 100 frames with full sheets of wired foundation. Also about 200 frames with old and some new full-drawn combs. I have but 7 colonies left. I examined them today, all have queens, and cover from 3 to 6 frames of brood, with plenty of honey.

1. What is a good method to increase these 7 colonies to 25 or 30, or even more, if the season should be extra good, without buying queens, honey, or sugar? I do not care for any surplus honey, but want increase of colonies in good wintering condition.

2. Can I use these old combs or frames of foundation? My location is dependent almost entirely upon white, alsike, and common clovers for surplus; no basswood or fall flow to amount to much.

OHIO.

ANSWERS.—1. Possibly you may prefer natural swarming, and here's a plan you may like: When the first colony swarms—it may not be a bad plan to hasten the swarming of one of your best colonies by giving it sealed brood from other colonies—when it swarms, put the swarm on the old stand, and set the mother colony in place of another colony, setting this latter in a new place. In a week or so it will send out a swarm with a young queen; set this swarm in place of the mother colony, and set the mother colony as before in the place of some other colony, setting this latter in a new place. Continue this as long as the mother colony continues to send out swarms. When another colony swarms, put it through the same routine. You will see that when you set the old colony in place of another strong colony, the field-bees of the removed colony will, upon their return from the fields, enter the swarming colony, thus strengthening it; and having a number of young queens in their cells it will be likely to continue swarming as it would not without such strengthening treatment. The removed colonies will soon recuperate so as to be ready for another removal, or perhaps for sending out a swarm. You will not have swarms so strong, but you will have more of them, and if the season is good you ought to have no trouble in reaching your number.

2. Yes, they are good capital. The bees will clean them out nicely.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get them subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.

FROM MANY FIELDS

Bees Wintered Well.

I put 69 colonies in the cellar Dec. 4, and April 5 took out 68 colonies, only one dead. I left 15 colonies outdoors, and one of them died, leaving 14. I have the bottoms nailed on all of my hives, with a $\frac{3}{4}$-inch entrance, which I leave open in the cellar. Out-of-doors I contract from 2 to 3 inches. I put burlap and paper on all of my hives, and the bees seemed to do well. Those I had in the cellar seem to be the strongest now. The bees that were wintered out-of-doors, about one-third of them are dead. I am the only one that puts them in the cellar. My cellar is 12x12x7 feet, and we had our fruit, vegetables, and 69 colonies of bees in it. I had one neighbor who had 56 colonies in the fall, and now has 22; another had 102, and now has 56; another had 50, and now has 44; the rest of my neighbors have lost from 25 to 50 percent. It has been bad for my bees since I took them out of the cellar—too cold. We had 2 inches of snow April 20, and it is cold to-day.

E. B. PRITCHETT.

Warren Co., Iowa, April 20.

Heavy Loss in Wintering.

I wrote the forepart of the winter and made an estimate of what I thought the percentage of loss of bees would be in this section. I think I said it would be about 75 percent, but as nearly as I can learn I did not place it high enough. By what I can learn, some have lost all their bees, others a third, but I don't score with either. I started with 185 hives full of bees and honey. March 30 I had 185 hives full of honey, three of which had about a quart each of live bees in them. I should think there was 4000 or 5000 pounds of honey. Most of it looks like stale molasses. Yesterday was the first day since last October that bees could fly and get back to their hives. I put part of my bees into the cellar and left part of them on the summer stands. Part were packed in chaff-lined hives, and part were not, with no difference as I can see.

C. M. LINCOLN.

Bennington Co., Vt., March 23.

Prefers Ready-Made Hives.

In reply to the letter of William W. Jacobs, I will say that I have tried the plan of making my own hives, but found out that it cost me more to buy the lumber and hire men to make them than they cost me at the factory; and then they would not be cut and fitted like the hives we get at the factory.

I have 70 colonies of bees. I needed some hives, so I bought 15 10-frame dovetailed hives with 2 supers for each hive, making 30 supers—hives and supers all complete excepting sections—for the sum of $31.50. The hives were cut very nicely, and of good material. I know that I could not get the lumber and nails and everything that is needed, and hire the work done, and have the lumber spoiled and the hives not half cut for that price. My time is worth $3.00 per day to me, and I would rather get them cut where we can get it done right. The men who run bee-hive factories are at big expense for machinery, they also pay big wages to experts to handle stock and machinery, and we all have to live and let live, also. I got good soft pine in those hives.

C. W. BLAKLY.

Mercer Co., Ill., April 17.

Cold Winter and Loss of Bees.

The past was a very cold winter here, as it was 35 degrees below zero, and the ground was frozen nearly 5 feet. The most snow we had was 6 inches. On Feb. 6 it was so warm that it melted all the snow, and the bees were having a great flight; the next morning it was 30 degrees below zero. This change in the weather is what killed my bees, with plenty of honey left, so I sold the honey from

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10 to 15 cents per pound on the ground, and I could sell more if I had it.

I intend to buy 5 or 6 colonies and increase to 15 this summer. The basswood did not bloom last summer, so I think there will be a good crop of basswood honey the coming summer.

There was a sort of bee-mouse which destroyed a good many bees and combs, but I soon put an end to that. The mouse is about 2 inches long, and has no eyes, very sleek, with short hair, and a short tail. I can't give it a better name than a "bee-mouse."

We are having nice weather here. The elm and box-elder are in full bloom, and soon the flowers will bloom. We had two nice rains this week, and that is what has made everything look green.

I received a few double numbers of the "Old Reliable," in which I found much to read that was of interest. B. F. SCHMIDT.

Clayton Co., Iowa, April 25.

Prospects Look Bright.

My bees wintered well; I lost only 5 colonies out of 180. I wintered 100 colonies in the cellar and 80 in an out-shed. I lost 3 in the shed, and they left from 25 to 30 pounds of honey in the hives. The bees are beginning to work a little, carrying in the first pollen to-day. We had a very severe winter here, and it still keeps cold. The prospects for a good season are looking bright, and my bees are all in good condition.

I hope the good work of the American Bee Journal will keep steadily on.

WM. J. HEALY.

Iowa Co., Wis., April 18.

Severest Winter—Hardy Bees.

The past was the severest winter in this State experienced for 30 years. The mercury reached 38 degrees below zero, and did not rise above zero at one time for 30 days in succession. In this vicinity there was an almost total loss of out-of-doors wintered bees. There was about the usual loss of from 5 to 10 percent of those in cellars, where they had sufficient stores. But owing to the fact that the bees put in but little honey after Aug. 1, some through carelessness did not feed, and several in this vicinity lost their entire apiaries, through starvation in their cellars.

An incident of remarkable hardiness in bees came under my observation. Three years ago last summer a colony of black bees, slightly crossed with Italians, took possession of a squirrel-house, about 30 feet from the ground in a large poplar tree standing on the east shore of the lake in this city. The house is 22 inches long, 18 inches wide, and 18 inches high, well made of double thickness of inch boards, with an entrance 4x5 inches, with a back window 4x5 inches filled with glass. The colony came through the past winter in good shape, making their first flight the first warm day in March. The location is the coldest in this vicinity, being entirely unprotected, and exposed to the north and west winds from across the lake. With such a colony of bees the problem of wintering would be solved. LOREN EDWARDS.

Waukesha Co., Wis., May 2.

Heavy Losses in Wintering.

The bees at the out-yard are as follows: 12 colonies alive, 2 of which are very weak; 8 colonies dead. Cause not ascertained. They were packed with straw on the summer stands, I think in good shape. Bees had no flight from Nov. 15 to March 20. Owing to the inability to do so, I did not unpack them, hence I can only guess that the continuous zero weather was too much for them.

The 111 colonies here in my home cellar did better. Five colonies are dead outright, perhaps as many more very weak, and probably about the same number medium weak. The balance are apparently very strong. To give a better idea, those classed as very weak occupy a portion of the space between 4 to 6 frames, and those very strong occupy all the frames, and some of the bees are hanging below them. I think it is safe to expect all to

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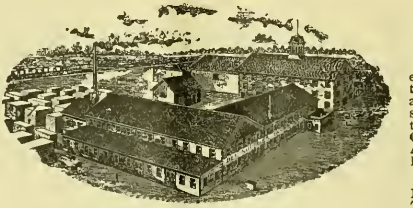

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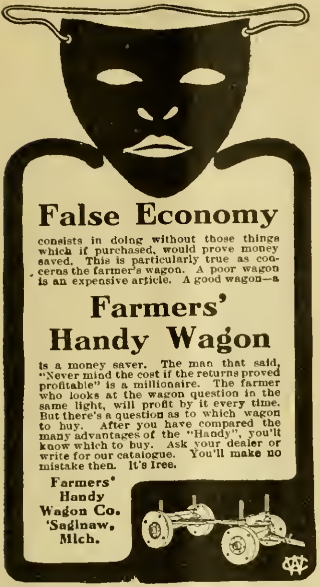

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be ready for the white clover honey, except the very weak ones.

What reports I can gather indicate heavy losses throughout the country, especially those wintered outdoors. I think lots of the white clover has winter-killed, but not enough to affect seriously the pasturage. When the bees are on the summer stands I can give a more definite report.

The last two nights and two days have been rainy, the temperature has gotten down to 30 degrees, and alternating drifts of rain and snow, with a northeast wind that indicates a rough night, and it's a comfort to know that my bees in the cellar won't know it. It's an ill wind that doesn't blow somebody some good. My bees would have been on the summer stands if I had not gotten hurt, or could have gotten some one with grit enough to put them out for me.

Soft maple and elm are almost in bloom. I long for weather fit for the bees to be humming their merry tunes again. They have been confined in the cellar for nearly five months. F. W. HALL.

Sioux Co., Iowa, April 8.

Winter Losses One-Half.

Bees are wintering badly. There is still snow on the ground, and the weather is cold. We have had a few warm days, and bees have taken a little rye-meal, and in some warm locations they have brought in a little pollen. Winter losses will be about 50 percent. The price of bees has advanced, and the demand will exceed the supply.

GEORGE W. ADAMS.

Essex Co., Mass., April 16.

Gathering Pollen—Colonies Strong.

The box-elder and maple trees are all budded out in this section. My bees are already gathering pollen, but the weather has been so cold.

I have 15 colonies of Italian bees. I wintered them on the summer stands, and they are all healthy and strong. I am running for comb honey. EDWIN BISHOP.

Jasper Co., Iowa, April 20.

Most Backward Spring.

In my home yard there are 6 colonies dead, 4 weak, and 100 with 3 to 5 frames of brood. It is a most backward spring, with pollen all killed, as was the early bloom. Not a thing for bees yet. The weather was cold and rainy till April 26. I have used chaff hives for 20 years. The price of honey here was killed by Colorado comb honey. White clover is very plentiful.

JOHN C. STEWART.

Nodaway Co., Mo., April 28.

Practically No Winter Loss.

Bees wintered finely. Our loss is 1 colony out of 400. How is that? We will lose some outside. It is very cold weather.

W. J. PICKARD.

Richland Co., Wis., April 20.

[April 25 we received the following from Mr. Pickard;—EDITOR.]

There has been the greatest loss of bees in this country I ever heard of—from 70 to 90 percent—and the weather is very bad now for what few colonies that are left.

W. J. PICKARD.

Transferring Bees—Queen-Rearing.

There are two things that I find absolutely necessary in my apiary—a good bee-smoker and the American Bee Journal.

I would like to tell how I transferred two colonies of bees from box-hives last June. I pried the boards from the top of the hives, and with the aid of a long, thin knife, made from the blade of a hack-saw, I cut the combs from the top. They were still stuck to the sides of the hive. I then placed on top a hive with full sheets of foundation, and the bees drew out the comb and filled it with honey. In the fall, when the brood had all batched, I

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2—15A5t

removed the top hive, turned the box-hive upside down, and placed the hive (with combs of honey that had been stored) on top, and smoked the bees up into it. I then put them back on the old stand, and they have wintered all right. I think this is an easy way of doing the trick.

This has been a hard winter on bees—they did not have a flight all winter. I lost one colony of golden Italians. I like the dark Italians best, as they seem to winter better.

There is a lot of alfalfa growing wild here. I do not know where it came from, but I mean to keep my eye on it and see if the bees pay any attention to it.

I hope some one will start up the queen-rearing discussion again. It makes interesting reading, and some of those breeders need stirring up. I have often paid a breeder his price for good queens, and he sent me some queer kind of bugs that I can not name. They certainly were not queen-bees.

HARRY GREVES.

Hudson Co., N. J., March 12.

Wintered Without Loss.

We are having very fair weather here at present, but it is trying to rain to-day. The white clover was pretty well killed out here; that is, where the grass is left long, for the mice have cut it tight to the ground, but where the grass is short it is alive. Whether there will be any honey in it or not we do not know. The basswood wasn't any good last year, so we have some hopes of it this year.

I put 41 colonies of bees in the cellar Dec. 11, and took them out March 22. They are all alive yet. The reason for my taking them out so early was that some of them were very light, and the rest of them were very restless, so I thought I would better take them out. Most of them are very strong, and some of them have quite a lot of brood. This is the first time, thus far, that I have wintered bees without losing quite a lot of them, and I have worked at the bee-business for 18 or 20 years. I bought 9 colonies this spring that were wintered outdoors, making 50 colonies for the coming summer.

U. S. BOYD.

Grant Co., Wis., April 5.

Bee-Keeping in Alabama.

Winter is gone, and spring is here again in all its glory, but it makes me feel sad to see so many vacant places in my apiary. Last fall I had 86 colonies, but on account of the very dry fall nearly all were short of stores and very weak. It was cold all the time from the middle of November until Feb. 20. Although the average was from 5 to 6 degrees lower than usual, yet we had no severe cold like we have sometimes. The coldest morning was 20 degrees above zero. Since Feb. 20 it has been very warm most of the time. The coldest morning was April 4. The warmest day was March 22—88 degrees in the shade. I had 3 queenless colonies; the robber-bees destroyed two or three, and about 20 starved. I have been feeding ever since it turned warm. The most of my colonies are in very good shape now. Our best flow began about four days ago. This is the largest since 1892. While the prospect is all one can ask for now, yet there is a chance for us to have a lot of cold winds. If we do, the crop will be short again.

Now, I must tell our black-bee brothers a little more about those "valuable blacks" and "worthless Italians." While those "valuable blacks" either all starved or came through very weak, those "worthless Italians" all lived except one colony, and were the first to put up a cell of honey. So there, now!

I read with interest about those boys and that bee-tree, also Mr. Hasty's comments on it. I believe Mr. Hasty is right. While it is true that there are some things that ought to be tried in law, it is also true that there are some things in law that ought not to be there. I have had robbers visit my apiary three times. I think I had evidence enough to have convicted them, but I did not bother about it, and I am glad that I did not do so. I will add, too, that I am as hard on stealing as anybody need to be.

I think that Mr. Gill and others are right

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Your wants fully supplied with anything needed in the Apiary. FULL STOCK OF A. I. ROOT CO'S GOODS; Danzenbaker Hives, etc. Let us mail you our 40-page Catalog. FREE.

JOHN NEBEL & SON,

7Dtf HIGH HILL, Montg. Co., MO.

CHOICE QUEENS

The very best of Goldens and 3-Banded all Red Clover Queens—Untested, 75c; 6 for $3.90; 12 for $7.75. ∴ Tested. $1; 6 for $5.50; 12 for $10.00. ∴ ∴ Breeders, the best, $3 00 each. ∴ ∴ ∴

Order from these prices and get your Queens from a reliable breeder who fills orders by return mail, no matter how large the orders are.

DANIEL WURTH,

19A8t KARNES CITY, TEX.

Please mention Bee Journal when writing.

ONE FARE FOR THE ROUND-TRIP

plus 25 cents, to Cleveland, Ohio, and return, via Nickel Plate Road, May 16th, 17th and 18th. Tickets good going date of sale and returning to and including June 10, by depositing same.

Three through daily express trains to Ft. Wayne, Cleveland, Erie, Buffalo, New York, Boston and New England points, carrying vestibuled sleeping-cars. Meals served in Nickel Plate dining-cars, on American Club Meal plan, ranging in price from 35 cents to $1.00; also service a la carte. Chicago depot, La Salle and Van Buren Sts. No excess fare charged on any train on the Nickel Plate Road. Chicago City Ticket Offices, 111 Adams Street, and Auditorium Annex. 'Phone Central 2057. 3—15A5t

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A Standard-Bred Italian Queen-Bee Free!

For Sending One New Subscriber.

As has been our custom heretofore we offer to mail a fine, Untested Italian Queen to the person who complies with the following conditions, all of which must be strictly followed:

1. The sender of a new subscriber must have his or her own subscription **paid in advance** at least to the end of this year (1904).

2. Sending your own name with the $1.00 for the Bee Journal will not entitle you to a Queen as a premium. The sender must be already a paid-in-advance subscriber as above, and the new subscriber must be a **NEW** subscriber; which means, further, that the new subscriber has never had the Bee Journal regularly, or at least not for a whole year previous to his name being sent in as a new one; and, also, the new subscriber must not be a member of the same family where the Bee Journal is already being taken.

We think we have made the foregoing sufficiently plain so that no error need be made. Our Premium Queens are too valuable to throw away—they must be **earned** in a legitimate way. They are worth working for.

We will book the orders as they come in and the Queens will be mailed in May or June. Will you have one or more?

If you cannot get a new subscriber, and want one of these Queens, we will send the American Bee Journal a year and the Queen—both for only $1.50. Address,

GEORGE W. YORK & CO., **CHICAGO, ILL.**

"Keep More Bees"

Is the title of an article by Mr. Townsend, of Michigan, published in the last American Bee Journal. It is a reply to Mr. Doolittle's criticism of some views expressed by Mr. Townsend in a series of articles that are appearing in The Bee-Keepers' Review.

For years Mr. Townsend has been making a specialty of bee-keeping, gradually developing a system of managing out-apiaries with few visits and little labor, and, in telling the Review "how he does it," he is furnishing some of the most valuable contributions that have ever been published—particularly so to the man who wishes to branch out and "keep more bees." This article of his in the last American Bee Journal is a fair sample of the plain, practical, convincing way in which he writes.

Send 10 cents for two late, but different issues of the Review, and the 10 cents may apply on any subscription sent in during the year; or, better still, send $1.00 for the Review for all of 1904, as you will certainly find the Townsend articles alone worth many times the dollar.

W. Z. HUTCHINSON, Flint, Mich.

ITALIAN QUEENS
In the State of Washington.

Long-tongued Red Clover Queens—Untested. $1.00; Tested, $1.50. After July 1—Untested, 70c; Tested, $1.00. Common Italians same price. Satisfaction guaranteed.

ROBERT MIRRING,
19A1t DRYAD, Lewis Co., WASH.

$10,000 WE HAVE JUST COMPLETED OUR TEN THOUSAND DOLLAR BEE-KEEPERS' SUPPLY MANUFACTURING PLANT

—and are ready to do business. Write us for leaflet showing our special Hives and prices. It is the greatest bargain you ever saw.

Mondeng Mfg. Company,
147 Cedar Lake Road.
MINNEAPOLIS, - MINNESOTA.

For Sale—8 Colonies,

in 9 and 10 frame (9¾x19 in.) 2 story hives. In first-class condition. No disease. Address,
MRS. C. E. HAYDEN, 7233 Wood St., Chicago.

in trying to get bee-keepers to make their own hives. Such goods are getting too high I can get all-heart, long-leafed pine, dressed on one side, for about $13.50 or $15.00 per 1000 feet.

I must tell something more about the bee-paralysis I had among my bees last spring. I used sulphur on all of the combs, and after I did so the bees quit dying. They had good-looking queens, but it seemed as if very few of the eggs hatched. I removed 3 queens, and gave them sealed cells from full-blooded Italians, and still used the same combs. They are 3 of the best colonies I have to-day. The other one superseded its queen, I think. They cast the first swarm to-day.

It is funny the way some are kicking up a dust about their way being the only way to rear perfect queens every time, when they well know that there is no such thing as perfection every time in Nature.

Hale Co., Ala., April 5. J. S. PATTON.

No Loss in Wintering.

Bees in this vicinity wintered well. I put 20 colonies into winter quarters, and had not a single loss. Bees are swarming.

G. W. FAGAN.
Arkansas Co., Ark., April 15.

Sulphur to Protect Empty Combs.

We have been a little bit discouraged for the last couple of years. After having had extra success in keeping bees through the winter for years, we lost all but 3 colonies two years ago, and have now only 20 colonies; but in our affliction we have learned something. After losing the bees we had hundreds of combs which we tried to save, but lost a great many by the moths. We tried several ways to save them, but would find stacks of hives with frames all woven together by the webs. At last we put a sheet of the American Bee Journal on a bottom-board and sprinkled sulphur thickly upon it, set a hive of frames on it, then another sheet of paper and more sulphur, and so on up. The moths don't like to crawl through the sulphur.

F. Z. DEXTER & SON.
Richland Co., Wis., April 18.

For Sale--APIARY STOCK

Includes 100 Chaff Hives, complete, in good order; 1 Extractor, Honey-Tanks, and everything necessary for the business. Also 20 colonies of Italian Bees, small house of 6 rooms—one of the best localities in Michigan. For further information, address,

MRS. WM. WRAY, Ashley, Mich.
18Atf Please mention the Bee Journal.

FOR SALE!

100 colonies of Italian and Carniolan BEES for sale; all in 8 and 9 frame hives—all nearly new—and bees all in good condition.
WM. J. HEALY, Mineral Point, Iowa Co., Wis.
17A5t Please mention the Bee Journal

8-Frame 1 1-2 STORY Hive for $1.

This hive is rabbetted at corners; is the best $1 hive made. No. 1 Sections, $4; No. 2, $3.50. Shipping-Cases, 12-lb., $8 per 100; 24-lb., $13; 20-lb. Danzy, $10; without glass, 50c less per 100. Dovetailed Hives, Foundation, Smokers, etc., CHEAP. Send for List.

W. D. Soper, R.D. 3. Jackson, Mich.
18Atf Mention Bee Journal when writing.

For Sale—25 Colonies

of Italian Bees, at $4.50 to $5.00 each. Address,
JOHN HERBERT,
19A1t HAMPSHIRE, KANE CO., ILL.
Please mention Bee Journal when writing.

CHICKS THAT LIVE

get strong and healthy—gain steadily in weight, are chicks hatched in Reliable Incubators.

The Reliable

provides automatically a constant current of odorless, warm air at a uniform temperature—chicks pip, hatch and thrive under its nature-like conditions. Send 10 cents and get our 20th annual catalog—full of poultry information.
Reliable Incubator and Brooder Co., Box J-153, Quincy, Ill.
Please mention Bee Journal when writing.

If you want the Bee-Book

That covers the whole Apicultural Field more completely than any other published,
Send $1.20 to
Prof. A. J. Cook, Claremont, Cal.,
—FOR HIS—
"Bee-Keeper's Guide."
Liberal Discounts to the Trade.

NO GAS TO KILL

Very little lamp gas in an incubator egg chamber often kills every germ. No gas can possibly creep into the

SURE HATCH INCUBATOR

because it's heated by our rustless, heavy copper, hot water circulator. Don't waste money and lose good eggs experimenting with poor incubators. Send for free catalogue B 10 and learn why the Sure Hatch hatches *sure*. Sure Hatch Incubator Co., Clay Center, Neb. and Indianapolis, Ind.
Please mention Bee Journal when writing.

WANTED! FANCY COMB HONEY

In no-drip shipping-cases. Also Amber Extracted in barrels or cans. Quote your best price delivered Cincinnati. The Fred W. Muth Co.
32Atf Front and Walnut, CINCINNATI, OHIO
Please mention Bee Journal when writing.

HONEY AND BEESWAX
MARKET QUOTATIONS

CHICAGO, April 7.—The market is heavily supplied with comb and extracted honey, neither of which are meeting with any demand, especially is this true of the comb. Prices are uncertain, as those having stock are anxious to sell it; therefore it is difficult to quote prices. The best grades of white comb bring 11@12c; anything off from choice to fancy is not wanted. Extracted, white, according to quality, sells at 6@7c; amber, 5@6c. Beeswax, 30@32c.

R. A. BURNETT & CO.

CINCINNATI, O., April 18.—The honey market continues to be dull; if anything, the prices on comb honey are lower; concessions are made on bigger lots. I quote: fancy white comb from 12½@14c. Sales on extracted are made at the following prices: Amber, in barrels, 5¼@5¾c; in cans, ½c more; alfalfa, water-white, 6@6½c; strictly white clover, for extra fancy, 7½@8c. Beeswax, 30c.

C. H. W. WEBER.

ALBANY, N. Y., April 25.—Honey market is very dull. Stocks of both comb and extracted are lighter than we thought would be a month ago, when we thought we would have to carry over the season. The demand for honey here will be light until the new crop comes. Quotations are nominally—8@13c for comb, and 5@6c for extracted. H. R. WRIGHT.

PHILADELPHIA, April 18.—Never in the history of the comb honey market has there been such a lot of off-quality of comb honey shipped into this market so late in the season. We have sold some of our own honey in the last few days, good No. 1 as low as 6c a box, the same honey we were getting 14c for 60 days ago. It is the old story that when bee-men find the season is closing and they cannot get shut of the crop themselves, they send it to the commission-men to slaughter it at any price they can get. We quote: No. 1 comb, 10c; amber, 7@8c. Extracted, fancy white, 7½c; amber, 6c. Beeswax sells readily at 31c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

CINCINNATI, April 18.—The honey market here is reassuming activity, and judging from present indications, and the lateness of the season, the last season's crop will be consumed before the arrival of the new. Amber extracted in barrels and cans, 5½@6½c; white clover, 6½@8 cents, according to quality and package. Fancy comb honey sells at 12@15c. Beeswax, 30 cents. THE FRED W. MUTH CO.

BOSTON, April 9.—Prices remain same as before, which are as follows: White in glass-front cases at 16c; No. 1, at 15c. Supply is ample, and demand light at this time. Extracted, water-white, 8c; light amber, 7@8c; with but little call for dark Florida.

BLAKE, SCOTT & LEE.

KANSAS CITY, April 18.—The demand for honey is a little better than it has been. Prices on strictly fancy comb are $2.50 per case, if not candied; the great trouble with the majority of honey coming from the West at present is that it is more or less candied, and about $2.00 to $2.25 is all we can get for it; amber is selling at $2.25 per case. Extracted is dull at 5@6c. Beeswax in good demand at 30c.

C. C. CLEMONS & CO.

NEW YORK, April 18.—There are no new features in the honey market. Some white honey is selling at from 12@13c; off grades at from 10@11c, and no demand for dark honey whatever. Market is very quiet on extracted of all grades, and prices are rather irregular. Beeswax very firm at 29@31c.

HILDRETH & SEGELKEN.

SAN FRANCISCO, April 27.—White comb, 1-lb. sections, 11½@12c; amber, 8@10c. Extracted, white, 5¼@5¾c; light amber, 4¼@4½c; amber, 3¾@4¼c; dark amber, 3¼@3¾c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

A shipment of 300 cases extracted went forward the past week per steamer for Germany. Local trade is of light proportions. Quotable values remain as previously noted, but market is not firm at these figures.

HONEY AND BEESWAX

When consigning, buying or selling, consult
R. A. BURNETT & CO.,
199 SOUTH WATER ST. CHICAGO, ILL.

PERFECT GOODS!
LOW PRICES!

A Customer Once, a Customer Always.
We manufacture

BEE-SUPPLIES

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(Been at it over 20 years.)
It is always BEST to buy of the makers.
New Illustrated Catalog Free.

For nearly 14 years we have published

The ÷ American ÷ Bee-Keeper

(Monthly, 50c a year.)

The best magazine for beginners, edited by one of the most experienced bee-keepers in America. Sample copy free.
Address,

The W. T. FALCONER MFG. COMPANY
JAMESTOWN, N. Y.

W. M. Gerrish, Epping, N. H., carries a full line of our goods at Catalog prices. Order of him and save the freight.

I. J. STRINGHAM, 105 Park Place,
NEW YORK

Manufactures and carries in stock every artice a bee-keeper uses. BEES AND QUEENS IN SEASON. •
Apiaries—Glen Cove, L.I. Catalog free.

ST. LOUIS, 1904.

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Catalog Free.
A No. 1 Smoker by mail, $1.

Bees, Honey and Beeswax bought and sold for cash.

LEAHY MFG. CO.,
1 ALTA SITA, EAST ST. LOUIS, ILL.

Bee-Supplies!

G. B. Lewis Co's Goods.

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Don't Wait Any Longer to Buy.
Big Discount for Orders Now.

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Write us to-day and say what you want, and get our prices. New catalog of 84 pages; it is free.
We also handle the famous
Hoosier Incubators and Brooders.

C. M. Scott & Co.
1004 East Washington Street,
INDIANAPOLIS, IND.

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Open to both sexes from the beginning. Founded in 1846. Highest grade scholarship. First-class reputation. 25 instructors. Alumni and students occupying highest positions in Church and State. Expenses lower than other colleges of equal grade. Any young person with tact and energy can have an education. We invite correspondence. Send for catalog.

MOUNT UNION COLLEGE,
Alliance, Ohio.

E. E. LAWRENCE, DONIPHAN, MO.
(Box 28), breeder of
Fine Italian Queen Bees
Orders booked now and filled in rotation. Send for price-list.
Please mention Bee Journal when writing.

27th Year **Dadant's Foundation** 27th Year

We Guarantee Satisfaction. What more can anybody do? BEAUTY, PURITY, FIRMNESS.
No SAGGING, No LOSS. PATENT WEED-PROCESS SHEETING.

Why does it sell so well? Because it has always given better satisfaction than any other. Because in 26 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material.
We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies
OF ALL KINDS.

Langstroth on the Honey-Bee—Revised
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

DADANT & SON, Hamilton, Hancock Co., Ill.

WE WANT NAMES

Of all beginners in bee-culture.
64 pages of instruction free, given in our new 1904 Catalog. Send for one at once.

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PACKING & SHIPPING DEPT

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No finer goods made in the world.
Order Now. Prompt Shipments.

G. B. LEWIS COMPANY,
WATERTOWN, WIS., U.S.A.

AMERICAN BEE JOURNAL

44th Year. CHICAGO, ILL., MAY 19, 1904. No. 20.

C. M. SCOTT.

(See pages 356-7.)

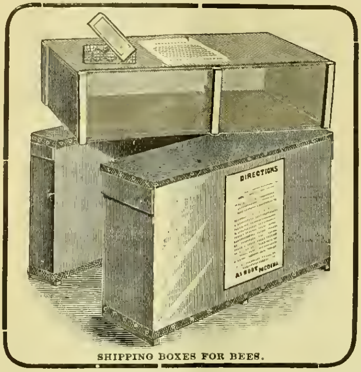
MIKE D. MOHR AND HIS APIARY.

C. M. SCOTT & CO.
BEE-KEEPERS' SUPPLIES

BEE-SUPPLY STORE OF C. M. SCOTT & CO.

E. ZIELKE AND HIS APIARY.

Have You Lost Your Bees?



SHIPPING BOXES FOR BEES.

Save Your Combs.

The winter losses in some parts of the country are heavy, and the demand for bees and queens will be large. Parties needing queens should send their orders at once, and state date when shipment is desired.

Early Italian Queens.

We are fortunate in being able to offer for April and May delivery a large stock of queens from our Southern breeders. While we have a much larger supply than ever before, it is highly important that you send your order at once to secure the queens when desired, as we will fill orders in rotation. We expect to be able to furnish untested queens from our Southern yards, in any number, after April 10th. Send your orders at once.

Prices of pure Italian Queens, untested, from our Southern yard for April and May shipment.

	1	12	50	100
Untested	$ 75	$ 8.50	$35.00	$ 65.00
Select Untested	1.00	11.50	47.50	77.50
Tested	1.50	17.00	70.00	130.00
Select Tested	2.50	28.50	——	——

Prices of Our Red=clover and Honey Queens.

Untested queen	$ 1 00	Select tested queen	$ 3 00
Select untested queen	1 25	Breeding queen	5 00
Tested queen	2 00	Select breeding queens	7 50
Extra select breeding queen, one year old			10 00

We book orders, and fill in rotation.

Imported Italian Queens.

We are prepared to furnish from the best breeders in Italy, imported Italian queens. They are put into our own yards and tested before sending out. We have only two grades—best, and fair imported, and prices are given in the table below.

Best imported queens.............$5 00 Fair imported queens $3 00

The Root Queen-rearing Outfit.

In this outfit are embraced the best points of the best systems in use. It will give satisfaction to the amateur as well as the expert. The cell-cups are made of wood, wax-coated. No melted wax is used in their manipulation, as they are attached to the cell-stick by means of a small nail-point.

The nursery-cage combines the features of nursery and introducing cages. By their use a queen can be released on the candy plan or caged in the hive as desired.

In connection with the outfit goes a booklet on queen-rearing—one which ought to put the veriest amateur on the high road to success. Outfit comprises three cell-bars with 50 waxed wooden cells, one frame of cages (18), one cell-forming stick, set grafting-tools, and a book on queen-rearing..................$4.50

If sent by mail, add 50c for postage.

Tools for Queen-breeders.

Wooden cell-cup with point for attaching to bar, 50c per 100; $4.00 per 1000.

Same, waxed ready for use, 75c per 100; $6.00 per 1000.

Titoff wire nursey-cages, 15c each; $1.35 per 10; $12 50 per 100.

Frame for holding 20 cages, including cages, $3.00.

Cell-stick, 10c each; $1.00 per dozen.

Transferring needle, double-ended and nickel-plated, 15c.

Jelly-spoon, nickel-plated, 15c each.

We can supply, also, fine-pointed lace-scissors with extra large bows, for clumsy fingers, at 35c each.

Nuclei and Colonies of Bees.

We are prepared to furnish one, two, and three-frame nuclei and full colonies of bees in eight-frame Dovetailed hives or Danzenbaker hives. The nuclei are put up in light shipping-boxes made of basswood, the sides of which are only 3/16 inch thick, and the ends ½ inch. The top and bottom are covered with wire cloth. This makes a very light package, affords plenty of ventilation, and is strong enough to stand shipping 500 to 1000 miles.

Any of our nuclei, even the 1-frame, will make good strong colonies by fall if properly handled. The three-frame if properly managed can be increased four, five, or even ten full colonies by fall if bought now; and instead of having any black bees, one will have in the beginning pure Italians of the choicest stock throughout his apiary.

PRICES OF NUCLEI.

One-frame nucleus without queen	$2 00
Two-frame " " "	3 00
Three-frame " " "	3 50
Full colony in 8-fr Dovetailed hive	7 50

We can furnish with the nuclei any queen mentioned in the table of prices of queens.

One-frame Nucleus--This contains a frame partly filled with brood and bees. The condition of the hives at different seasons of the year vary so that we can not always put up nuclei in the same way; but in every case we aim to give full value. Weight about 7 lbs.

Two-frame Nucleus--This is just the same as our one-frame nucleus, except it has twice the amount of bees or brood, or of both. The box is larger, and holds two frames—one full frame of brood, or two frames partly filled. Shipping weight, about 10 lbs.

Three-frame Nucleus--This is three times the size of the one-frame nucleus, and is made up in the same way as the one and two frame. Shipping weight, about 15 lbs.

A Full Colony will contain 8 Langstroth frames in Dovetailed one-story hive—three full frames of brood, or equivalent, in six combs, and enough bees to cover fairly all the combs. No queen is furnished at the table price. Purchaser is to seclect the queen and add her price to that of the bees. Our colonies are all put up in new Dovetailed or Danzenbaker hives, painted two coats. Shipping weight about 40 lbs.

Special Offer!

Gleanings in Bee Culture one year, and one untested Italian Queen from our Southern yards..................................**$1.00**

We begin shipping at once. Orders filled in rotation. Do not ask for special arrangements; at this low price we can't make exceptions.

Gleanings in Bee Culture one year, and one untested Red-clover Queen for **$1.50**

We begin shipping these queens about April 15. Orders filled in rotation.

Guarantee.

We agree to deliver queens in good order to any part of the United States or Canada, from April 15 to October. In case of queens valued at $5 or more, we ship in a one-frame nucleus, (no charge for nucleus). If a two-frame or three-frame nucleus is wanted, add to the price of the queen the difference in price between the one-frame and the two or three-frame. Losses must be reported on arrival.

We can make Shipments of Nuclei from

Cincinnati, Ohio, Philadelphia, Pa.,
New York City, Medina, Ohio,
Wharton, Tex., High Hill, Mo.,
St. Paul, Minn., Augusta, Kans.

This will give you very low Express Rates.

THE A. I. ROOT COMPANY,

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Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor. CHICAGO, ILL., MAY 19, 1904. Vol. XLIV—No. 20.

Editorial Comments

Supposed "Manufactured" Comb Honey.

Some time ago we received by express a one-pound section of comb honey from J. L. Pitting, of Crawford Co., Ohio. Accompanying the package was Mr. Pitting's personal card, and a marked clipping from some newspaper which had very kindly published the standing offer of $1000 for a pound of manufactured comb honey.

Evidently, Mr. Pitting thought he had found a sample of the manufactured article, and all he had to do was to forward it to us, when we would send him $1000 by return mail.

Of course, Mr. Pitting was deceived, for the sample section of honey we received from him bore the rubber-stamp of one of our old subscribers in Reno, Nev. It is about the finest sample of alfalfa comb honey we ever saw. Its very beauty, and whiteness of comb and wood, must have caused Mr. Pitting to believe it was manufactured. He was not accustomed to seeing such fine specimens of genuine bee-work. We are not surprised that he was fooled. And yet, if he had seen together several sections of the same lot of honey, he would have noticed that no two of them were exactly alike, while, if machine-made, all would have been alike.

We at once wrote Mr. Pitting the facts in the case, but have heard nothing further from him. However, he has our thanks for his sweet gift. We are fond of nice alfalfa honey.

Shall Hive-Covers be Ventilated?

Covers made with thin boards above and thin boards below, with an air-space between, seem to be viewed with increasing favor, but there is a difference of opinion as to whether the space should be a dead-air space or ventilated. If a chief purpose of the cover be to keep the hive cool in hot weather, then it is better that the cover should be ventilated by having openings at the sides for the entrance and exit of air, for this will be cooler than to have the air confined. If it be important to keep the air warm in cold or cool weather, then the air should be confined, for a well-ventilated cover in winter will be little warmer than one made with a single surface of thin boards. So in very hot climates there would be advantage in the ventilation. In more northern localities the air should be confined. Still better, the cover may be made so as to have the openings closed in winter and open in summer.

Cleaning Bees from Extracting-Combs.

W. D. Soper gives in Gleanings in Bee-Culture a kink worth trying. He says:

> I go to the hive, take out two combs, set them down, then I move over the next one so I can get at each side with a Coggshall brush. I smoke a little, and rub the sides of the comb with the brush. The bees will tumble off and disappear in the lower part of the hive. Take out this comb, do the next the same, until all are cleaned off and taken out. Take out as fast as cleaned off. Then put the two combs first taken out back in, and brush. The combs in a 10-frame hive can be cleaned in two minutes, and not a bee outside of the hive to crawl around—no queen lost, or robbers to bother.

Should Presence of Foul Brood be Concealed?

One answer to the question might be found in some of the foul brood laws, the one in Canada, for example, which makes any one subject to a fine who does not report to the proper officer if he knows of a case of foul brood in his own apiary or *anywhere else.*

But that refers only to making it known to the proper officer, so that the case shall be sure to be looked after, which is a very different thing from telling it to everybody. It is very desirable that no case should be concealed from the foul-brood inspector, but would it be the right thing for the inspector to tell every one in the neighborhood—or out of it, for that matter—that John Smith has foul brood in his apiary? Suppose John Smith sells bees or queens, what chance has he for making sales if it be generally known that his bees have foul brood?

That might disturb the business of John Smith, especially if he were dishonest enough to send out a consignment of foul brood with each sale made, but would it not be a good thing for others? and should not the rule be the greatest good to the greatest number?

When a contagious disease exists in John Smith's house, the city authorities promptly put upon that house a placard so that every one who passes by may know that scarlet fever or some other dangerous disease is there. They do not wait to inquire whether John Smith's business will be injured by it; they are not doing it to help John Smith; the general good is saved by it. The fullest publicity is sought. Should it not be the same with foul brood? Should inspectors or any one else conceal knowledge of cases of foul brood wherever found?

A Queen Lays 4000 Eggs in 24 Hours.

W. O. Victor, gives in Gleanings in Bee-Culture, the picture of a frame of brood which contained by close calculation 8200 cells of sealed brood, and this brood was all hatched within about two days from the time the first hatched. Mr. Victor thus feels sure that Mr. Doolittle's estimate of 4000 eggs in 24 hours was in this case reached.

A Bee-Paper a Necessity.

The necessity for a bee-book—a book that gives instruction in bee-keeping—has been many times urged in these columns. No doubt it will be urged many times in the future, for new members are constantly joining the American Bee Journal family, and it would be hard to give a more valuable piece of advice to a bee-keeper without a bee-book than to urge that he make some sacrifice if necessary to get one. No bee-keeper can afford to do without a bee-book and a bee-paper, but if he can not get both at once, let him get the book first. The necessity for the paper as well as the book has been less urged, but it is well put by James Lockett, in the Australasian Bee-Keeper, as follows:

> But every bee-keeper, let him be the beginner, advanced or the finished bee-keeper—he should have the bee-journal in preference to a bee-book with two or three hundred pages, that has been written 10 or 15 years ago. The bee-keeper, who makes a start with a bee-book only, gives it all his attention for a start because it is new to him; after a time he thinks he knows enough about bees, and his book gets a rest—it is getting stale to him, and he goes on (in his own mind a practical bee-keeper), knowing about one-third of what he should know. The man that takes the bee-journal has always something fresh to look at—let him be the beginner or the practical bee-keeper, he is always ready and waiting at the end of the month to get his bee-journal and read it through, to see what information he can get. Here is where the beginner puts in some good work, he will see where

some bee-keeper made a terrible blunder—just what he was going to do himself. How he will smile and avoid the red light of danger that he saw in the bee-journal.

Then, again, if the bee-keeper is at a loss to find out something about his bees, and he can't see it in his bee-journal, how handy it is for him to write to the editor, who is always ready to give his subscribers the latest information that they may require.

Miscellaneous Items

Mr. Morley Pettit, of Ontario, Canada, wrote us May 6, as follows:

"Spring has really come now, and queens are working overtime to make up for the long delay."

Mr. F. A. Snell, of Carroll Co., Ill., called on us the first of the month. He is one of the old-time bee-keepers, yet as up-to-date and alert as the most progressive youngster in the ranks. He missed the Chicago-Northwestern convention last December, but we think he will not be guilty of so doing again.

Mr. M. M. Rice, of Grant Co, Wis., one of our long-time readers, called on us recently with one of his sons who is just graduating from the Chicago Theological Seminary. Mr. Rice lost practically no bees the past winter, having about 100 colonies. He is one of Wisconsin's many successful bee-men, and a genial man to meet, as well.

Mike D. Mohr, whose apiary is shown on the first page, is one of the younger bee-keepers, and lives in Rock Island Co., Ill. The picture does not show all of his bees. Mr. Mohr has read all the bee-books of importance, and with his experience not only manages his own bees, but also those of his neighbors. Last year was a very good one for white clover honey in his locality.

E. Zielke and Apiary appear on the first page this week. He has kept bees over 5 years, and also has worked a camera over 2 years. The picture is of his apiary in Nebraska, when he lived there. He has also kept bees in Alberta, Canada.

The fall of 1902 he shipped 3 strong colonies of Italians to Alberta, which were 14 days on the cars, and arrived very weak. They were wintered outdoors, and by spring were dead.

His Nebraska apiary averaged 23 pounds of comb and extracted honey per colony in 1902.

Deacon Hardscrabble, who wrote both sense and nonsense for the American Bee-Keeper for several years, passed away Jan. 27. Considering his deaconship, he always seemed to scrabble hard to find the good in any one, even if he did put it down in black and white in a rather rough way. "Stenog" says in Gleanings that he "frequently dipped his pen in sulphuric acid." Perhaps he imagined by so doing his written words would have the same effect on the characters of those he criticised as such acid has on dirty beeswax. Still, it all served to please the Deacon, and never harmed "the other fellow." But "peace to his ashes"—without any sulphurous odors.

Queen-Rearing and Its Proportions.—Mr. John M. Davis, of Maury Co., Tenn., writing us May 4, said:

George W. York & Co.—

Dear Sirs:—We have had the worst season that I have experienced since being in the queen-business. Cold rains, high, cold winds, and days at a time that a bee dared not peep out of the hive, have been the order of the day. I am now returning all money to patrons asking for queens by return mail, writing them that I can not fill their orders before May 25 or June 1—that it will take me nearly so long to clear off my book. The queen-trade is assuming immense proportions.

Yours truly, John M. Davis.

Early queen-rearing, even in the South, seems to be interfered with nearly every year by unfavorable weather. This is exceedingly unfortunate, for there are many bee-keepers who require early queens in order to save colonies that became queenless during the winter.

Mr. Davis says the business of rearing queen-bees "is assuming immense proportions." True it is that the demand for queens is growing from year to year. And the breeder that is prepared to supply that demand with good queens will not lack for generous and profitable patronage, which is bound to increase as the seasons come and go.

White's Class Advertising Co. (which occupies the larger part of this 9th floor of the Caxton Building, at 334 Dearborn St., where our office is located also,) tendered a banquet to some of the leading publishers and advertising men of this country at the Union League Club, Chicago, on the evening of May 5. It was intended to limit the number of plates to 100, but it became necessary to increase the number, so that at the banquet there were 135 present. It was a rare occasion.

Pres. Frank B. White.

Mr. Frank B. White, whose picture appears herewith, is the president of the Company. He has an advertising experience of 17 years, and is a leader along the line of agricultural newspaper advertising. About 12 years ago Mr. White started the banquet idea among agricultural advertisers and publishers here in Chicago, and it was said that it was the first of the kind at which no liquors were served. Of course, this last banquet followed the same commendable rule.

It was the second occasion of the White's Class Advertising Co., last year's banquet having an attendance of but 85. It is the intention to make it an annual event. It will be looked forward to with great interest by those who are so fortunate as to be invited to participate. Dr. C. C. Miller was one of the guests on both occasions, and was probably the "oldest boy" present on May 5.

After the menu had been partaken of, Mr. White introduced the Editor of the American Bee Journal (the treasurer of the Company), who read interesting extracts from a number of letters received by Mr. White from those who regretted their inability to be present. They seemed to realize from afar how much they were going to miss.

Col. Hunter, of the Star Monthly, was afterwards introduced as toast-master for the occasion. He in turn introduced the various speakers of the evening. The general subject for discussion was, "Higher Ideals in Advertising." There were about a half-dozen excellent addresses, which will appear in due time in the monthly publication known as "White's Class Advertising," subscription price of which is 25 cents a year. It is a compendium of information along agricultural advertising lines, and one of the handsomest publications of the present day. Any one who is at all interested in the subject should read it regularly.

White's Class Advertising Co. is devoted exclusively to preparing and placing advertisements in the class of papers known as Agricultural. The Company was organized about a year ago, and has had a phenomenal growth. Its president, Mr. White, is imbued with a spirit of high ideals, and has an original way of carrying them out in his work. On May 1st the space occupied by the Company was more than doubled, in anticipation of the increased business which is promised for another year. With the clean and honorable way of doing business which has characterized the Company since its inception, it certainly has a very promising future. It is thoroughly equipped for handling its business in a satisfactory and up-to-date manner. It is proving its ability and efficiency daily. All it asks is an opportunity to serve the best interests of its

White's Class Advertising Company
True Blue Pure Gold
Chicago, Ill.

clients. Advertising has become a profession. It is a specialty unlike anything else, and it is but reasonable to believe that one who has made such a thorough study of it as Mr. White has during the past 17 years, should be a competent leader, and be able to realize the greatest possible financial returns from the appropriations which advertising concerns make to develop a greater demand for their goods.

White will treat you right—if given a chance.

Sketches of Beedomites

Mr. C. M. SCOTT.

C. M. Scott & Co. are bee-supply dealers in Indianapolis, Ind., as all our subscribers know who read the advertising columns of the American Bee Journal. On the first page this week we are pleased to present pictures of Mr. C. M. Scott and the store where the business is carried on.

Mr. Scott was born on a farm in 1869, where he remained until he was 17 years of age. In 1899 he established a branch bee-supply house in Indianapolis for G. B. Lewis Co.—the first branch house, by the way, that this well-known firm ever had. Mr. Scott was the manager, and conducted it in the name of the G. B. Lewis Co.

In 1901, Mr. S. bought the business from the Lewis Co., and those interested with him have since operated under the present name of C. M. Scott & Co., of which Mr. Scott is still manager. The business was at once moved to larger rooms, and they have each year since then increased their business and floor-space until at present they occupy more room than ever. But whatever the extent of the business is now (which has doubled), Mr. Scott has made it by promptness, strict integrity, appreciation, and politeness to all. He thinks nothing is too good for the bee-keepers. And the fact of handling the goods of the Lewis Co. would insure satisfaction along that line. His trade extends over Indiana, Illinois, Ohio, Kentucky, and even beyond these States.

Mr. Scott is a practical bee-keeper, and spends as much time with his bees as his close attention to business will allow. He has not missed a single business day at his store for nearly three years.

This firm have also been extensive dealers in honey the past year or so.

Mr. and Mrs. Scott are actively engaged in church and charity work, believing in systematic benevolence, which is bestowed without any ostentation on their part. He is a total abstainer, and in politics a staunch, voting prohibitionist.

As will be noted, Mr. Scott is one of the clean, honorable, and pushing young bee-supply dealers, of which quite a number, fortunately, are becoming scattered over our country. This promises well for the future apiarian business. We are glad to see that as the older bee-supply dealers, who made a success of the business, are either aging or passing away, their places are being filled with young men of such sterling character and signal ability. We wish them all, including Mr. Scott, the realization of their highest anticipations.

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we have used it ourselves.

PRICES, prepaid—Sample copy free; 10 for 20 cts.; 25 for 40 cts.; 50 for 70 cts.; 100 for $1.25; 250 for $2.25; 500 for $4.00; 1000 for $7.50. Your business card printed free at the bottom of the front page, on all orders for 100 or more copies. Send all orders to the Bee Journal office.

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Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

Convention Proceedings

Report of the Northern Michigan Convention.

The annual meeting of the Northern Michigan Bee-Keepers' Association was held at Traverse City, Mich., March 30 and 31, 1904.

Owing to delay of railroad trains, caused by a flooded condition of the roads, the officers and members of the Association living north of Traverse City did not arrive until 5 p.m. of the first day. A number of members, and bee-keepers of Traverse City and from places south of there, gathered at Montague Hall and effected a temporary organization, with Geo. E. Hilton in the chair, and E. D. Townsend as temporary secretary. Mr. A. I. Root was also present. A very pleasant and profitable session was held, and several important questions were discussed in an informal manner. The minutes of this session were lost, or mislaid, so the secretary does not have the benefit of them in making this report. The meeting adjourned at 5 p.m., to reassemble at the hall at 7 p.m.

EVENING SESSION.

It was called to order by Pres. Geo. H. Kirkpatrick, and the business of the evening was opened by declaring the question-box to be in order.

EXTRACTED VS. COMB HONEY.

Why do bees, when run for extracted honey, produce more pounds than when run for comb honey?

Because they do not have to take time to build comb. Also, because bees gather more honey in cool weather, and wax for comb-building is produced less rapidly in cool weather.

Which is more profitable, extracted or comb honey? A. I. Root, E. E. Coveyou, and others, answered that it differs in different localities.

SPRING FEEDING OF BEES.

Does it pay to feed bees in the spring? Yes, especially if short of stores.

Do you feed in the fall or wait until spring? Mr. Bartlett said, better feed in the fall. Mr. Bingham puts the bees into the cellar with about 1½ pounds of honey per colony, and fed about 7½ pounds of sugar syrup; bees in fine condition at present.

What is the first thing we should do when we go home? Take an inventory of the blessings with which we are surrounded, and thank God for them all.

CLIPPING QUEENS—BEES IN CUBA.

Does it pay to clip queens' wings? Yes, by Pres. Kirkpatrick and Mr. Bartlett. Mr. Fox does not agree with them, thinking it does not pay.

Mr. Silsby asked Mr. Root for some experience with bees in Cuba. Mr. Root said they were not a success the past winter; not much honey.

SECOND DAY.

The secretary's and treasurer's reports were read and approved. The latter reported expenses paid and one dollar in the treasury.

After a ballot was taken, and the votes counted, Central Lake was declared to be the place chosen for the next meeting.

The election of officers resulted as follows. President, Geo. H. Kirkpatrick; vice-president, E. E. Coveyou; and secretary-treasurer, W. Mohrman, of Central Lake.

SPRING MANAGEMENT OF BEES.

The spring management of bees was then taken up. Mr. Hilton thought that bees wintered in the cellar were more liable to dwindle in the spring than those wintered out-of-doors. If feeding is needed, feed inside the hives in the evening; use every effort to promote brood-rearing.

Mr. Bingham said he winters his bees in the cellar, and thinks the spring dwindling of cellar-wintered bees is due to less loss of bees during winter, the oldest bees dying soon after flight in spring. He had 150 colonies in the fall and united down to 75, which were in the cellar then.

Mr. Townsend said that most of his experience had been in out-of-doors wintering, and he does not favor stimulating for brood-rearing.

Mr. Coveyou had noticed that bees went together when set out in the spring; he would close the entrances to prevent it.

BEE-SMOKERS—UNCAPPING HONEY.

Mr. Bingham showed the construction of his smokers to prevent blowing ashes and creosote upon the bees. For fuel he uses tamarack, hemlock or maple bark.

Mr. Root asked as to what the bee-keepers present use in smokers? Replies showed rattan wood, maple bark, excelsior, chips, etc.

Mr. Bingham was asked how to uncap honey. He answered: Keep the knife sharp and moist; if left to dry, with honey on the edge, it will not cut so well. If wet or moist the knife moves freely and cuts perfectly.

Mr. Townsend explained how his son uncaps honey, also their method of brushing bees from combs. He also asked if any one present worked for comb honey on the Hill plan, visiting apiaries once a week. No response.

BEE-ESCAPES—T SUPERS.

Mr. Root asked about the use of bee-escapes. A large percent of bee-keepers present use them with good results, both for comb and extracted honey.

James E. Harwood asked which is better for comb honey production, section-holders with fences, or T supers? Both are successful.

CLEANING EXTRACTING-COMBS.

Mr. Bartlett asked whether bee-keepers present put extracting-combs out so that the bees may clean them up in the fall. It was thought to be better to do so than to leave them just as extracted from.

Adjourned to 1 o'clock p.m.

AFTERNOON SESSION.

This was the foul brood session. The subject was taken up and discussed quite generally, but no quick, "sure-cure" remedy was advised.

FOUL BROOD AND NATURAL SWARMING,

Do bees ever carry foul brood with them in natural swarming? In the discussion no definite conclusion was reached.

Mr. Root thought there was no danger of bees getting foul brood from honey left by bees dying in trees in the woods, as he did not think they carried it with them in swarming. Being asked by the secretary if bees from trees did not have the same chance to rob hives where they had died of foul brood, Mr. Root said he would give it up.

The convention adjourned *sine die*, at 2:20 p.m.

JAMES H. IRISH, *Sec.*

Contributed Articles

Black Brood—How to Get Bee-Laws.

BY PROF. A. J. COOK.

EVERY student of animal life is conscious that all animal forms are quick to vary, when submitted to different conditions. This tendency has given us our races of people, our breeds of cattle and other domestic animals, and, not least in importance, the several races of our bees. If all the higher animals and plants are subject to this law, why then should not the lower be as well? Remembering this law and tendency, we are not surprised at the conclusions of the scientists of the Department of Agriculture, that black brood is only a different form of foul brood, and both the result of the selfsame Bacillus.

I have found the genuine foul brood of California appearing under two quite different types or forms. They appear alike in nearly every particular, but in the real typical form the brown, unctuous mass when drawn from the cell with a tooth-pick or pin, will, when it lets go, fly back with a snap as though there were much elasticity in the drawn-out string. In the other form, which is not at all scarce where the disease abounds, the string lacks the spring, and does not fly back, but simply falls down. I have never doubted for a moment that both were foul brood, and supposed that the modification was simply an illustration of the law referred to above.

That there should be a still more modified form, and that it should appear as the so-called black brood, need not surprise us. The Government experts tell us that the Bacilli that form or cause the foul brood, and those that produce the black brood, are certainly the same, which makes the other assertion certainly true. They can hardly be mistaken, as they have gone over the ground the second time, and their position as scientists makes their authority absolute.

We see, then, that the methods of destroying the two are of course the same, and the practical bearing of their discovery is close in line with the practice of bee-keepers, as the method of control of both forms of the disease have been known to be the same for a long time. The reason is now obvious, as the disease is the same, and is caused by the same germ, of course we should expect it in both cases to succumb to the same remedy.

DESIRABLE LAWS FOR BEE-KEEPERS.

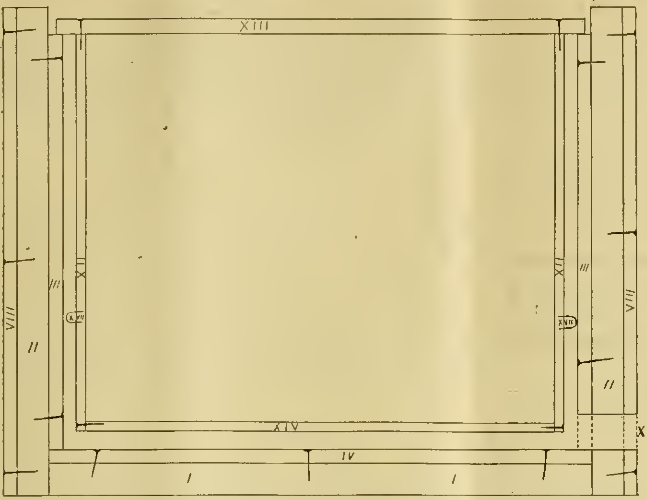
Of course we are all glad that the Ohio Legislature has passed the desired foul brood law, and why not? What are our legislatures for except to meet the needs of the people in just such ways? I believe that the most of the legislators are desirous, yea, eager, to do that which will best serve the wishes and wants of their constituents. Of course they can not know the merits of any proposed measure, or at least of all the bills put before them. Either, then, we must employ a costly lobby when we wish legislation, or else we must have some way to make our needs and wishes known to those whom we choose to represent us. And this brings me to the point which I wish to urge before our readers at the present time.

If we could be fully organized, we could accomplish much in this line at any time when we wished help. It seems to me that all our rural industries—farming, gardening, fruit-growing, poultry-raising, and bee-culture, should be organized, and be ready to pull together in all good lines. We are working in California to bring this about. The fact that we are not all working in the same field need be no objection, as all such work is related. The fruit-man will be a better pomologist if he knows something of bees, their habits and work. The bee-keeper will do better if he knows the principles of orchard practice; and so all through the various industries of country life. If these organizations were general there could not be the unfortunate differences that often mar the peace of our country neighborhoods. Many subjects discussed at the club would concern all alike, and be of general interest.

In several places in our region, we have clubs in which all are interested, and in such there are no wars between bee-men and the fruit-growers. I addressed a club of that like the other evening where the attendance never falls below 100, and where the club influence is seen in all lines of work, and in all places in the community. They own a beautiful club-house, their own piano, a nucleus of a fine library, and the roads and places all show the effects of organization. To bring all up to the best methods of doing things, to secure the highest social status in the community, to secure fine, neat places, to have those best signs of progress in any community—first-class roads—and last, to secure the amount of legislative influence that our importance warrants, we must become fully and thoroughly organized. The very best use of clubs is to remove bickerings, jealousies in the community, and suspicion, which is the blackest demon in the way of that true spirit of generosity and good-will which is ever in the forefront of all that is best in the neighborhood.

The first law of any account passed in the California Legislature last winter was the "Foul Brood Law," and it passed with no opposition at all. This would not have been the case except for our many splendid clubs. Indeed, our clubs have extended their influence to Congress, and have influenced the National law-makers.

I hope all our readers will see to it that there is a good club in their neighborhoods—call them "Improvement Societies," if you please, and then make them true to the name. Get everybody interested, and enlighten all, in all matters that interest any in the place. There is nothing that is so desirable in any place—and all places, especially in the country districts, where there is now so much of isolation—as the fullest co-operation among all. This will come quickest with the strong club to push it and prepare people to work for it. The telephone is a strong enemy of isola-



OBSERVATORY HIVE—LONGITUDINAL, VERTICAL SECTION, WITH FRAME IN PLACE.

tion, and, thanks to our club, we have one in our place, a local enterprise, which is up-to-date, cheap, very efficient. We have brought the rate from $2.50 a month (the charge of the old Co.,) to $1.00, and still make money. This place had five 'phones in the old company, as against 60 now. Does this not score big for the club?

Los Angeles Co., Calif.

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Directions for Making an Observatory Hive.

BY ALLEN LATHAM.

A CORRESPONDENT being interested in my article on the value of observatory hives, which appeared on page 53, has asked me to give directions through the American Bee Journal for making such a hive. He requested that I furnish photographs, but I have thought that little could be gotten from photographs; but, moreover, it is not easy to get good results photographing glass hives. Instead, I have drawn sections of the hive and so lettered the parts that one can easily reproduce such a hive after getting the materials together.

MATERIALS NEEDED FOR AN OBSERVATORY HIVE.

I. 1 piece, 7/8 by 2 by a length 1½ inches longer than the outside length of frame
II. 2 pieces, 7/8 by 2 by a length 2 more than the depth of frame, outside measure.
III. 2 pieces, 3/8 by 1¾ by a length ½ more than the end-bar of frame, measured from the *under* surface of top-bar to the *under* surface of bottom-bar. (The length of these can vary, they regulating the space below the frame.)
IV. 1 piece, 3/8 by 1¾ by a length equal to that of I.
V. 2 pieces, 3/8 by ¾ by a length 1¾ more than that of I.
VI. 2 pieces, 3/8 by 1¼ by a length equal to that of V.
VII. 4 pieces, 3/8 by 1¼ by a length 2 less than that of II.
VIII. 2 pieces, 3/8 by 2¾ by a length equal to that of II.
X. 2 sheets of glass, about 1/8 thick, length equal to that of I, width 7/8 less than length of II.

(All dimensions are in inches, and fractions of an inch.)

Additional materials are two dozen ¾-inch brass screws, and a few nails of assorted sizes. A frame of brood and honey with a few bees and queen, or a frame of young brood with many bees and no queen, or a small swarm with empty frame. A board about 6 inches wide, of a length to be set in a window beneath the sash. Through this board is a hole to correspond with the entrance of the hive, and at such a distance from the lower edge of the board as to let the hive rest on the window-sill. Two large screws are to be put through this board from the outside to secure the hive. The board itself is firmly fastened to the window-frame.

The other letters in the diagrams are explained as follows:

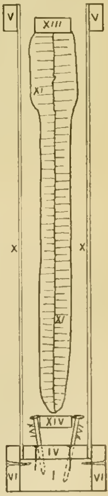
XI. is the comb.
XII. the end-bars.
XIII. the top-bar.
XIV. the bottom-bar.
XV. the entrance.
XVI. nails to hold bottom of frame and keep it from swinging.
XVII. end staples.

The diagrams are drawn to a scale, for a frame 13½ long by 11½ deep, outside measure. The table of materials above has been compiled for any size of frame, allowing ½ an inch below the frame, 3/8 at the ends, and a bee-space above.

After getting the materials together, nail the two pieces marked II to the ends of I. IV is then nailed to one I, allowing the space at each edge for the thickness of glass. Then the pieces marked III are nailed in place, looking out to nail so as to leave a place to bore the entrance-hole. As glass varies in thickness, it is well at this point to fit each side to its sheet of glass. Then the nails are driven in which secure the bottom of the frame (XVI). The sheets of glass are put in place, and V, VI, and VII *screwed* in place. See that the glass is just flush with I and II, or you may crack it. No putty is used, for it may be desirable to remove the glass for cleansing, or to replace a broken pane. Then pieces marked VIII are nailed in place. Finally the hole, an inch in diameter, is bored for the entrance. It should be flush with the bottom of the hive.

The bees and frame are best put into the hive out-of-doors, after the hive has been fitted to its place in the window. After the bees are in, a slip of paper is put over the entrance, the hive is carried to its place, adjusted, the paper removed, and the screws put in. It may be well to stop up the entrance in the board before putting in screws. (This last advice is for beginners.) The entrance is freed, the window closed, and all is O.K.

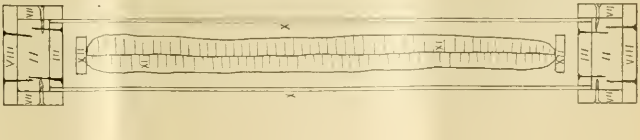
VERTICAL CROSS-SECTION.



The hive had best be put in a north window, unless there is an east or south window permanently sheltered from the sunshine. If the hive is placed in a south window without some *fixed* shade, with the idea in mind of providing a movable shade, the day will surely come when some one will forget to put the shade in place, and when next visited the hive will be found converted into a solar wax-extractor. Yet there is a great disadvantage in the north window, for the reason that our coldest winds come from that quarter. Their effect can be partly overcome by stopping well the cracks in the window and cutting down the entrance temporarily. If one has a suitable window with a milder exposure I think that the bees might be better off. Whatever exposure is chosen the window should be above the ground floor on account of passers-by.

The correspondent also wishes hints for the care of such a hive. Now, experience is a good teacher for an observing person, and no person ought to keep bees unless he is observing. I will simply say that the observatory-hive colony is in an abnormal state, and will require special attention. It will need to be fed through all the time that

LONGITUDINAL CROSS-SECTION.



honey is not flowing, and should have a good frame full when winter comes on. The best way to feed, as far as I know, is to have a shelf about flush with the entrance, on which a tumbler of feed inverted on a piece of glass or in a shallow dish can be set. Put a pin under the edge of the tumbler for air-vent. This is a safe way to feed, and can be practiced at any hour of the day with practically no danger from robber-bees. It is well to throw over the hive several thicknesses of cloth to conserve heat.

No bee-keeper should be without one or two of these hives. He will learn many things which he has never observed, and will find undoubtedly that he did not know so much about bees as he thought he did.

New London Co., Conn.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

From Cold to Hot—Queenless Colonies in Early Spring.

A week ago the complaint was, "Such cold weather." Well, this week we have suddenly jumped into summer weather, the thermometer standing at 70 and 80 degrees, and one day at 85 degrees. That weather clerk is really trying to make up. Dandelions are blooming freely, and plum blossoms are out.

For some reason—whether on account of the late, cold spring or the unusually severe winter—there seems to be, judging from reports, an unusual number of queenless colonies this spring. Now the question is, What is best to do with these colonies? Is it best to let them rear a queen?

Last spring we had two queenless colonies that were remarkably strong. I suspect that they had had an accession of bees that did not belong to them, which probably accounted for their being queenless. They were such strong colonies that I could not bear to have them broken up, so plead their cause and begged that they be supplied with combs of young brood or eggs from time to time to keep up their strength, and allowed to rear a queen. In both cases the queens reared so early were poor, worthless affairs, and the colonies had to be requeened later.

It would have been much better had those bees been taken to strengthen up weaker colonies, queenless bees being the best kind of material for that purpose, as they will mostly stay where they are put, and not endanger the life of the queen even if the colony is very weak to which they are given; and sometimes a good queen may be saved by giving bees to a very weak colony.

I have had my lesson, and am convinced that there is no use trying to rear *good queens* too early in the season.

Small Loss in Wintering—Chickens as Drone-Catchers.

Dear Miss Wilson:—I feel like entering the circle again, and after making my best bow tell you that after being confined to my room for almost three months I am able once more to visit my bee-yard. I find all the colonies, with the exception of 2, just as busy as they can be carrying in pollen, while the young bees out playing are making almost as much noise as during the swarming season.

I rapped on the 2 hives where no bees were seen going or coming, and as there was no response I judge they are all dead. But if those 2 colonies, out of 34, will cover my loss I will think they wintered remarkably well.

I have enjoyed reading Dr. Miller's "Forty Years Among the Bees" while I was confined to the house, and I hope I will soon be able to look after the wants of mine.

I would to say to Sister Wainwright, she would better go slow with her late invention, a "drone-catching cage," for if she had watched pretty closely she would find that those chicks were not very choice whether it was a drone or a worker bee they enjoyed as a morsel, for we had the same experience in our own bee-yard, and had to kill off all those chicks that watched the hive-entrances (after satisfying ourselves they were picking up bees that were heavily laden with pollen). So we thereby enjoyed some sweet morsels ourselves in the way of fried chickens.

Well, for fear this will not meet with the same success as my other in missing the waste-basket, I will give space for some other sister bee-keeper who can write a more interesting letter. With best wishes for the success of the American Bee Journal, and especially the sisters' corner, which is presided over so nobly by our faithful "Queen," I will close by wishing all the sisters a prosperous year.

Adams Co., Ohio, April 25. Mrs. Mary A. Ray.

Indeed, you may well think that losing only 2 out of 34 colonies very good for outdoor wintering the past very severe winter. If you had saved only 2 out of 34 instead of losing 2, you would have done as well as a good many others.

8-Frame Super on a 10-Frame Hive.

I am using the 10-frame hive and do not want to go to the expense of changing hives, but would like a smaller super. Do you think I could conveniently use the 24-section T super on the 10-frame hive? If I could, it would be so much lighter to handle. Mrs. H. C. Holmes.

Jefferson Co., Ill.

Yes, you can use them nicely. We used them for some time on 10-frame hives before we changed to the 8-frame hive.

Place the T super on the hive just so the outside edge of the super at one side will rest on the inside edge of the hive (not flush with the outside edge), then there will be a small space on the other side of the super which can be easily covered by laying on a small strip of wood, such as a piece of lath.

Last Year's Experience with Bees.

As I see no report from any neighboring bee-keepers from this part of the State, I will give a brief sketch of what the bees did for me during the spring and summer of 1903.

I had 25 colonies, spring count, in good condition, which gave me a surplus of 3250 pounds of salable honey, all of which sold for 10 to 12½ cents per pound. And I increased, by natural swarming, to 53 colonies, all in good shape for winter, and with plenty of honey to winter on.

From white clover we got our honey, which was as good as the best honey season we have ever had in this locality. The white clover seems all right this spring; it is starting up about the same as last spring, according to the season, which is about two weeks later than the average. The past winter has been a hard one on the bees wintered on the summer stands.

So far the weather has been very unfavorable for the bees, as it had been freezing every two or three nights until April 20. Consequently colonies that have come through so far are very weak compared with other seasons at this time of year.

I lost some colonies, and had some weak ones which I united, and have at present 40 in fairly good condition out of the 53 of last fall. This is the first winter loss I have had for several years.

Neighbors, let us hear from you through the good old Bee Journal. I am not much of a writer, and this may not be very interesting, but I am a good reader, and I enjoy reading reports from all. Luna Elmore.

Jefferson Co., Iowa, April 25.

"The Hum of the Bees in the Apple-Tree Bloom" is the name of the finest bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us *one new* yearly subscription to the American Bee Journal at $1.00.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get them subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Hop Honey—Adulterated Honey.

1. If bees are kept near a field of hops would the honey produced in a yard so located be liable to have a bitterish taste?

2. If A produces pure extracted honey, marks it with his own name and guaranty, sells the same to a second party who adulterates it, puts it back into the same cans containing the producer's label, and sells it to a third party, who comes back to the second party, and he, to clear himself, goes after the first party, what protection, if any, would the producer have against being prosecuted? OREGON.

ANSWERS.—1. I don't know. The nectar is likely to be somewhat after the character of the plant from which it is obtained, but for all that the hop nectar may not be bitter. Can any one tell us about hop honey?

2. The producer could hardly be convicted without clear proof that the honey had not been tampered with.

Brood-Combs Built Crosswise.

I have 2 good, strong colonies in which the combs in the brood-frames are so badly crossed it is impossible to get them out so as to examine them. They are well filled with capped brood and sealed honey—are very heavy—and it appears as if the bees would swarm soon. How can I best manage them to get the combs so I can handle them? MISSOURI.

ANSWER.—Turn the hive upside down. With a long knife and saw, cut away the attachments from the sides of the hive, then lift the hive off the combs. That will give you a fair chance to get at the combs, and it is just possible that by cutting away a little here and there you may be able to crowd the combs into place so they will be easily movable. At the worst, you can cut them all out and fasten into the frames as in transferring. It will be perhaps better for you to wait till three weeks after the prime swarm, when there will be no brood in the way. Of course, the bees must be smoked or drummed out of the way in order to allow you to operate.

Cottonwood and Bay-Tree—Swarms Uniting.

1. What is the honey-value of cotton-wood, also the bay-tree? The latter seems to be a species of magnolia, and blooms here in June.

2. Did you ever have an experience like this? On April 28 I had an after-swarm come out, and about the time I had gotten them in the hive a prime swarm from another hive came out and went in with them; as the latter went in another prime swarm issued from another hive and went in on top of the other two. On the morning of the 29th I found one dead queen in front of the hive, and about noon of the same day one of the largest swarms I ever saw came out of the trio-hive, leaving the original after-swarm apparently as they were in the hive at first. Both the large and the small swarms are doing nicely. Natural separation, isn't it? MISSISSIPPI.

ANSWERS.—1. I don't know; I've always supposed that cottonwood was of little value unless for pollen. If the bay-tree is of the magnolia sort, it ought to be good.

2. No, that was not at all a common occurrence. Are you sure you had your after-swarm remaining with the young queen, and that one of the laying queens was not left in the hive?.

An Experience with Bees—Light-Weight Sections.

1. I had 2 colonies of bees, and one I thought was queenless, as it was very weak in bees and did not seem to do so well as my other one, which was full of bees. So into the queenless one (No. 1) I introduced an Italian queen on April 30. Sunday, May 1, I went to church and some one told me there that my bees were swarming. I went home and found that a large cluster of bees had alighted in an apiary right across the road, and they said they came from my apiary. The bees had alighted on the corner of a hive, and after a while they started to go into a hive where there were only a few bees without a queen. After searching around we found my Italian queen, and shortly after another queen which was just about dead, and in fact the Italian did not seem to be well. Now there were more bees in that "swarm" than there were in the hive the queen had been put into; and, another thing, the bees were very yellow, such as were in my other hive (No. 2). I examined No. 2 which had previously been very strong and found scarcely any bees. All the bees were apparently still in No. 1. Now how do you solve this problem?

Now I suppose I have two queenless colonies. The other fellow says I can have the bees that went into his queenless hive, but may be they are now queenless, because when we released the Italian queen from the bees which were balling her we put her in the hive with the rest of the bees, but she seems as if she would not live long. Anyway, let me hear your verdict.

2. I use 1⅞ sections, and am going to use plain separators, which rest close to the edge of the sections. Will this produce light-weight sections? ONTARIO.

ANSWERS.—1. At this distance it is not easy to make a sure guess, but it looks as if No. 1 was not in the circus at all; No. 2 having swarmed out and gone across the way. It is quite possible that your neighbor's supposed queenless colony was not queenless after all, and that its queen was killed by the intruding swarm, the Italian queen being the queen of No. 2.

2. If your sections are 4¼x1⅞ they will be light-weight, or less than a pound. If by saying that separators "rest close to the edge of the sections" you mean that the separtors are as wide as the full depth of the sections, that will probably be the same in result as if the separators were a little narrower. But are you sure it will leave sufficient passage (1-6 inch or more) for the passage of the bees?

"Canucks" and the National—Requeening Weak Queenless Colonies—Extent of Increase.

1. Would it be any benefit to me, a "Canuck," to join the National Bee-Keepers' Association?

2. I have a colony of bees which is very weak in bees, and queenless. Would it be safe to let them alone until settled warm weather in May, before requeening, or would I better requeen now? Can it be done?

3. I lost nearly all of my bees the past winter, so I will have to buy some, but I am not sure about what number to build up to. About 2 miles east of here is an apiary of 30 colonies, 2 miles west about 70 colonies, across the road about 25 colonies, and elsewhere in the village about 12 colonies. Now how deep do you think I would better dive in? The bees get honey mostly from white clover and catnip. All the territory from northwest to northeast is unoccupied for miles. Do you think I could profitably build up to 100 colonies? ONTARIO.

ANSWERS.—1. The benefits of membership extend to Canada, and a number of good "Canucks" belong. By all means identify yourself with the organization.

2. Don't do either; unite them with another colony *now*. It will be hard for you to believe that's the best thing, but five years from now you'll be sure of it—yes, five months from now, if you try to keep that colony going.

3. Those 37 colonies in the village count the same as if they were yours, and it's doubtful if 137 colonies will find enough to do in that spot. But it's a very hard thing to tell anything about it for certain.

Carrying Out Young Bees—When to Put on Supers—Swarming—Dividing Colonies.

1. I have noticed for several days that the bees in 2 of my hives have been carrying out young bees and dropping them on the ground in front of the hives. What is the cause of this? Have they not enough room to store honey in, or do robber-bees do it?

2. Should I put on supers, or is it too early yet?

3. I saw several drones a day or two ago. How long after the first drones hatch will the colony send out a swarm? or can one tell by this?

4. When is the best time to divide colonies? ILLINOIS.

ANSWERS.—1. No, it is not because the hive is crowded with honey. In that case the queen would not have room to lay, but the brood would not be carried out. The reverse may be the case if much brood is carried out—starvation. If only a few larvæ are carried out, it may be work of wax-worms.

2. In your region white clover is probably the first source of surplus, so don't put on supers till clover is in bloom.

3. You can't tell anything about the drones.

4. About the time bees swarm naturally, which will likely be after white clover is fairly under way.

Best Method of Introducing Queens.

What, in your judgment, and with your experience, is the best method of introducing queens? MARYLAND.

ANSWER.—That's a rather tough one, when there are so many ways, and occasional failures will come with almost any of them. For introducing queens of ordinary value, the usual plan of putting her in a provisioned cage answers well; the bees eating out the candy to liberate the queen. A short time ago E. F. Atwater sent me a sample of the Chantry cage, and although I've had no opportunity to try it, I should expect it to be safer than the usual cage. Over the candy in the usual passage is a bit of excluder zinc, which allows the bees to eat their way into the cage, still keeping the queen a prisoner there. For some reason, bees will be kind to a queen when in a cage, while they would ball her if out of it. Another and much longer passage, without any zinc over it, allows the bees to eat out the candy and liberate the queen a day or so after making her acquaintance in the cage.

But if you want to make a sure thing of a valuable queen, take several frames of sealed brood with young bees just emerging—don't take a single bee with this brood unless it be babies just out of the cell—put the queen in a hive on these combs, fastening all bee-tight, and keep in a warm place for four or five days, and then you will have a colony ready to put on its stand with not the slightest danger to the queen.

FROM MANY FIELDS

Bees Wintered in the Cellar.

I put 100 colonies of bees in the cellar Nov. 12, 1903, and they are there yet; they have not had a peep of daylight since. They seem to be in good condition, and I think they can stand it for 10 days more, at least—the way the weather looks they will have to. The thermometer registered 4 degrees below zero April 18.
JOHN COX.
Chippewa Co., Wis., April 18.

Hatching Eggs Over Bees.

I tried four hen's eggs over bees the other day. I chose a powerful colony and fed them so that they were hot. The hive was packed with others in a case in ground-cork. A thick cushion was over the eggs. They had every advantage. After the end of a week I broke them and found that the germ had made progress corresponding to about 48 to 60 hours under a hen. At that rate, had the eggs been left to hatch (?), they might have furnished chickens in about *seven* weeks. One egg showed just a touch of red, the little embryo being about $\frac{1}{4}$ to $\frac{3}{8}$ of an inch long.

Yet I have known chickens to be hatched in bee-hives. I knew a man in my boyhood who did it. At that time he was through with bees, as his had all died, and he found the hives very convenient for hens'-nests.

As far as I know, I lost only 2 colonies out of 38, in out-door wintering. Those two starved.

The American Bee Journal is better than ever.
ALLEN LATHAM.
New London Co., Conn., May 2.

A Long Winter.

I put 19 colonies in winter quarters, and lost 6. This was a very long winter, and last summer was a poor one for bees—it rained all the time. I hope we will do better this year. I am a great friend of the bees and would not be without them.
A. A. GOETSCH.
Dodge Co., Wis., April 25.

Key Remedy for Bee-Stings.

I wish to tell of a simple but very effective remedy for stings of any kind. When stung, pull or rub out the sting, then place the bore of a key exactly central over the spot and bear down hard. After, say 30 seconds, take off the key, which has left a deep ring around the wound, and a tiny drop of yellowish fluid standing over the wound; and this is the end of it. I wish every one who gets stung knew of this and would try it.
P. T. LEMASTER.
Spartanburg Co., S. C., April 15.

Heavy Loss in Wintering.

The bee-keepers in this part of the country experienced quite a heavy loss with bees—about 75 percent. My loss so far is 30 percent. There is one foot of snow on the ground at this date.
C. H. WALE.
Ontario, Canada, April 18.

Bee-Keeping in Missouri.

I have only 39 colonies yet, but intend to double that number in the near future. I don't think a better country could be found for the bee-industry than southwestern Missouri. Our bees are now on the summer stands. We have had snow only two days the past winter, and the bees are all right, and are busy taking in pollen. They commenced to do work as early as the last of February. Bees have shown great activity all winter, and not a week has passed but what they have made use of their wings.

I think we have a favorable spring for bees, and I intend to gain all the information I can from the American Bee Journal, and to devote a great deal of time to the work. Of course, a

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great deal of time is required in running a farm of 80 acres, and as I am a watch-maker by trade I will not have as much time with the bees as I would like to have. At present I am busy making hives.

I don't think that we can all employ the same methods with bees in all localities, but must often use our own judgment, and also try to study out new ideas, and apply our methods according to the season. It is with bee-men as with farmers, some raise 22 bushels of wheat to the acre, while others raise only 7; and some bee-men can increase their colonies very fast, and make a good profit from honey, while others do nothing.

As I have read with so much interest, of their different ways of working bees, I feel it my duty to all to make mention of my own experience.

I make hives 2 story out of 10-inch lumber, and have the supers large enough to hold 56 pound-sections. I have the sections open on four sides, and insert the strips of foundation in the center. When all have been inserted, I sprinkle the super thoroughly, as it seems to give great satisfaction to the bees. I don't use full sheets of foundation any more, as I did some years ago. I never place the hives under shade trees, as I used to do, but keep them in the open, no matter how hot the July sun may be, but rather put up a small shed for each hive a little larger than the hive.

I am feeding three colonies at present with candy and syrup, but I don't feed more than I have to, as they will be sure to store it in the super, and make out of it what is called "factory-made" honey, and, of course, my customers would then accuse me of selling home-made honey. A neighbor, who sells quite a lot of honey every year, had a barrel of honey last year which granulated. If that ever occurs again, just turn the barrel upside down and the honey will turn to liquid again in about two weeks. A. G. ERICKSON.

Barry Co., Mo.

The "Parson" Tells How.

I would like to say for the benefit of some of the people who have been trying to hatch chicks in bee-hives, that they do not go at it right. They should fill the hive about ⅜ full of straw, chaff or dirt, make a nice comfortable nest for the eggs, and, last but not least, place on top of the eggs a nice, quiet, broody hen!

I prefer an 8-frame hive, but a 10-frame will answer fully as well. A. S. PARSON.

Otero Co., Colo.

Bees Wintered Well.

My bees have wintered well. I put 100 colonies into winter quarters, and they are all living, up to date, and appear to be strong. The prospect here is not very good for a crop of clover honey this year, for so much of it has frozen out during the winter. My crop of honey last season was very good, and I hope for a good one this year.

Here is success to the American Bee Journal. Long may it live! P. McDOWELL.

Mason Co., Ky., April 12.

Poor Prospects in Arizona.

The prospects for a honey crop are very poor in this part of the world. We have had ½-inch of rain since last September, and unless we have some good rains soon, the alfalfa in the Salt River Valley will be very light, if not a failure. WM. ROHRIG.

Maricopa Co., Ariz., March 28.

Heavy Losses in Wintering.

The bees have had some good flights this month, but this morning the thermometer is away below freezing, and a foot of snow on the ground. There was a great loss of bees last winter. I do not think there are more than ⅛ alive all through Ontario. I can't complain, though, as I lost only 13 colonies out of 15!

I suppose this is not the proper place to make inquiries, but here goes for one question: There are about 6 bee-keepers near here; one 1½ miles east has about 30 colonies, one 1¾ miles west has about 60 colonies, one 1¼ miles west has about 10 colonies. One man across the road with 20 colonies, and the other two in the village, with about 10 colonies between them. Is there any show for me? and to what extent could I safely build up? HARRY SMITH.

Ontario, Canada, April 16.

[See Dr. Miller's answer to "Ontario," on another page.—EDITOR.]

Wintered Well—Prospects Good.

We have had a fine winter for bees in this part of the country, and they have come through in excellent condition. I visited my ranch yesterday, and found every colony alive, and in the pollen business.

White clover is in good condition, which gives us a good prospect for an average crop of honey. The early fruit-bloom will soon be out. Enough peach-buds are alive to give a fair crop. A. A. BALDWIN.

Jackson Co., Mo., April 5.

Unfinished Sections.

I am so pleased with what Mr. E. E. Hasty says about removing unfinished sections to be finished somewhere else, that I want to second all he says on page 297. And add, that those bees so thrown out of the job on which their hearts are set to finish will not go immediately at any other job, and so there is loss of time, and a certain amount of sulking. I believe that the necessary amount of smoke and handling to remove sections, and to give some other work, disconcerts and confuses the bees and hinders work not a little. Better give dividers to hold lots of bees outside of the outside sections, and let each colony uninterruptedly finish its own work. Yes, generally, I reckon, it's better to leave all on until the end of the season. Of one thing there can be no two opinions, and that is, you will save yourself a great deal of bother by so doing.

Ontario, Canada, April 25. S. T. PETTIT.

A Long Confinement.

In regard to long confinement, I had two colonies which did not take a general flight for 130 days—from about the middle of November to March 24. They both wintered finely, not specking the hives at all. While other bees were flying March 2, they refused to break cluster.

We are having a fine warm spell here, and bees are pushing right along. They are 10 days behind last year, though. ALLEN LATHAM.

New London Co., Conn., May 4.

Some Minnesota Bee-Notes.

The most of the bees about here were wintered in the cellar. About all of those that were left out-doors have died. Those in the cellar wintered well.

I put 38 colonies in the cellar in November. Some of them were very light when put in, and I was doubtful about their wintering. One I gave some comb honey in the cellar. The others I did not feed.

I finished taking them from the cellar April 10, and all came out alive except one which died of starvation.

My bees are all in 10-frame Langstroth hives, and as soon as the weather would permit I looked them over and took a frame or two of honey from the colonies that had more than necessary, and gave them to those that needed it.

This spring is very cold and backward, and there has not been much time that the bees could fly until this week.

I have just finished examining each colony, and find they all have brood, so they have queens. I found some of the queens and clipped them. those that were not already clipped. I have a clipping trick that I used some last year, but it is too much bother. When I find the queen I lay the comb down on top of the hive and carefully pick up the queen near her head, with the thumb and finger of my left hand, and with my jack-knife in the other hand place the point of the small blade under

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one of her wings and press my thumb down upon it. The work is done in much less time than it takes to tell it.

I find nothing better than a common screw-driver with which to loosen covers, frames, etc.

I made a comb-carrier with a tight cover in which I place the combs when taken from the strong to the weak, also to carry extracting-combs; and with a strip of leather I make some places on one end to hold a screw-driver, case-knife, whiskbroom, etc., and find it very convenient.

The last two or three days the bees have been gathering considerable pollen and some honey, mostly from soft maple, I think.

J. Ridley.

Wright Co., Minn., April 28.

Colony Absconded.

My bees wintered splendidly. One colony absconded, and left some 15 or 20 pounds of honey. The queen was a fine one, and left clean combs and fine white honey, but no sign of any brood. There were about 3 pints of bees. They swarmed out and settled. I put them in a hive and they came out and left for parts unknown. C. A. Manous.

Blair Co., Pa., April 28.

Wintered in Bad Shape.

I took the bees out April 23; they were in bad shape, having spotted the hives badly, but I think they will come out all right if the weather is favorable from now on. To-day they are busy carrying in pollen.

C. H. Harlan.

Kanabec Co., Minn., April 28.

Hiving Swarms—Winter Loss.

I read a good many things in the Bee Journal that are worth a good deal to me, so I feel as if I ought to give a small kink back. I hived a number of swarms last season, and at night found the hives empty. One swarm I watched to see go in, and saw 5 queens, so I put on an entrance-guard, tacked it tight, and that was the only swarm I saved that day out of 5.

It rained so much that I did not get half a crop last season; we had a good fall flow, so the bees had plenty to live on.

The winter loss was more than usual.

C. G. Ascha.

Berkshire Co., Mass., April 30.

Cold Winter—Wintered Well.

My bees wintered well. I lost 8 colonies out of 131, wintered outside in chaff-hives. They average almost all strong in bees. We had a very cold winter and plenty of snow. They had a few cleansing flights. I looked them over. H. Behrens.

Ozaukee Co., Wis., April 1.

Severe Snow-Storm in April.

This country was visited by one of the most severe snow-storms imaginable, lasting fully 24 hours, and the snow piled up in my bee-yard to the extent of 3 feet in some places, whole rows of hives were completely covered.

I am now starting out with a scoop-shovel to relieve the bees from their imprisonment. The storm started April 14 and lasted to April 15.

I expect a heavy loss in bees, and they have been confined fully 5½ months to the cellar, and consequently many of them are short of stores by this time, with hardly any chance to help them any on account of the severe weather. A. C. F. Bartz.

Chippewa Co., Wis., April 16.

Weak Colonies in the Spring.

I want to caution some of the amateurs in the East who, I know, will have many little, weak colonies this spring, and who will be anxious to help them build up, and many will make the common mistake of giving frames of brood to the little, weak ones.

First, it is very hard to find a frame of brood that is hatching in a strong colony that will

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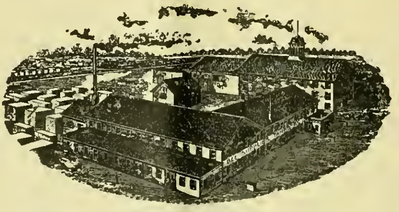

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fit the brood-nest of a weak colony, and a novice is liable to lose some very valuable brood by such a practice.

In the early spring, when all the bees are anxious to get some brood hatched out, it is much better to tuck the little ones up snugly and abandon them to their fate until such time as the large, strong colonies have plenty of hatching bees; and then instead of giving the little colony more brood to care for, just take a comb from say 2 strong colonies, that have plenty of hatching bees, jar the frames, or give a gentle shake to cause the old bees to take flight, and then with a feather or suitable brush, brush the young bees into the weak colony, leaving its brood-nest intact, and return the combs of unhatched brood and eggs to the colony from which they were taken.

Then see how the little colony will spread its own self under the stimulus of a quart, or even less, of young bees, and they will put the brood where they can better care for it than it is possible to give it to them. The trouble is, there is a much smaller percent of the brood hatching than the novice thinks there is, and a cool night leaves it sticking out of the cluster and it is lost.

I have seen much brood lost in this way, and not all among novices, either.

Do we all of us, always, do as well as we know? M. A. GILL.

Boulder Co., Colo., April 21.

Wintered All Right—Cold Spring.

I winter my bees out-doors, have only 7 colonies, and they have wintered all right so far. They have had only two good flights, and the last day they were carrying in pollen. It has been a cold spring here so far. We live on the shore of the St. Lawrence River, and the ice has not gone out yet, and it makes it cold. I use leaves for packing, and like them very well. There are not many bees kept around here.

The "Old Reliable" is all right, and I don't want to be without it as long as I keep bees.

F. WEBSTER.

Jefferson Co., N. Y., April 18.

None Lost in Wintering.

We took our bees out of the cellar April 3, as it was the first nice day we had for a long time. We have not lost a colony this winter. We had 92 colonies outside which were packed in chaff, and 48 in the cellar, which came out all right. We kept the temperature down to about 45 degrees all the time.

The weather is unfavorable almost all of the time. We have 6 cloudy days to 1 clear day in a week. If it does not change soon we may lose some of our colonies, too.

Last year was not a very good one, but we hope that this year will be better.

FRED BANKER.

Brown Co., Minn., April 15.

Wintering Bees—Feeding Bees.

This has been the hardest winter on bees that I have ever seen, and almost all of the bees that were left on the summer stands here are dead. There was not a day from Nov. 15 to April 1 that bees could fly in safety. I never try to winter my bees out-of-doors, as it is more work to pack and protect them properly on the summer stands than it is to carry them in; and then, if you should need to feed them it can be done with more ease and comfort in the cellar.

It sometimes makes me smile when reading the Journal, of some writer being frightened because his bees have not had a flight for 3 or 4 weeks. Why, bless you, my bees did not have a flight for almost 5 months! For example, I put them into the cellar Nov. 19, 1903, and put them out April 5, 1904, and they came through all right, and they were wintered on sugar fed to them in the fall, with a cake of sugar put on top of the frames this winter. So don't be afraid to feed sugar if you should lack honey. There were some pieces of sugar-cakes they did not use, so I melted it to-day and fed it that way.

Right here I will tell of a feeder which is nice to use at this season of the year. Take a small drinking fountain that will hold per-

This Lightning Lice Killing Machine kills all lice and mites. No injury to birds or feathers. Handles any fowl, smallest chick to largest gobbler. Made in three sizes Pays for itself first season. Also *Lightning Lice Killing Powder, Poultry Bits, Lice Murder, etc.* We secure special low express rates. Catalog mailed free. Write for it.
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Take Notice That the New Century Queen-Rearing Co. will have 1000 Queens ready for the mail by April 20. Tested, $1.00; Untested, 75c; 5 for $3.25; 10 for $6.00. Prices on larger quantities and Nuclei given on application. "Prompt service; fair treatment" is our motto.
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13Atf Please mention the Bee Journal.

Raising Evergreens from Seed.—The method employed in raising evergreens from seed has been and is still considered a trade secret by most nurserymen. However, we are able to present our readers the following valuable article from the veteran evergreen-grower, Mr. Charles F. Gardner, of Osage, Iowa, who was for three years honored with the presidency of the Iowa State Horticultural Society, and who has had over 40 years' active experience in the work of growing evergreens from seed. Mr. Gardner says:

"First select a small, well-drained spot in the garden, and prepare the seed-bed by spading thoroughly, and then rake the surface until the soil is pulverized as finely as possible to get it. On this freshly-made seed-bed scatter the seed, allowing about 25 seeds to the square inch of ground. Press the seed into the earth with a garden-roller, or back of the spade, and then immediately cover with a very light coat of sand. As soon as planted a partial shade must be made so that the rays of the sun will be broken before reaching the bed. The best way to make this shade is to make a lath box two feet high, and large enough in other ways to cover over the bed nicely. Leave space of 1½ inches between the lath, and this will give the right amount of shade, and will also keep chickens, etc., from scratching into the bed. Leave one side of the box open, and place the open side down over the bed. The seed will germinate in from five to seven days; the first thing being noticeable will be the seed itself, which comes up through the sand on a sturdy little stem. In a few days the seed-shell drops off, and the little tree unfolds its first branches. Keep all grass and weeds from the little trees, and in the fall lightly mulch with clean, dry straw or hay. The shade must be left over the bed until the trees are two years old, at which age they can be transplanted into rows in the garden."

One of the first nurseries in the West to grow evergreens from seed was the Gardner Nursery Co., Osage, Iowa, who grow them by the million each year. If you are a lover of evergreens, and wish to try growing them from seed, write to this company, mentioning this item, and they will send you a packet free, containing 100 seeds, by return mail.

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We think we have made the foregoing sufficiently plain so that no error need be made. Our Premium Queens are too valuable to throw away—they must be **earned** in a legitimate way. They are worth working for.
We will book the orders as they come in and the Queens will be mailed in May or June. Will you have one or more?
If you cannot get a new subscriber, and want one of these Queens, we will send the American Bee Journal a year and the Queen—both for only $1.50. Address,
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We offer for sale, from our stock of bee-supplies, the following list, some of which is new, and the balance as good as new:

20 Wood-bound 10-frame Zinc Honey-Boards	15c each.
1080 New, Clean, Wired Extracting Combs (L. size)	15c each.
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1 6-inch Comb Foundation Mill	15.00.
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100 New L. 10 fr. Dovetailed Hives (each consisting of a Body, Cover and Bottom-Board—all nailed)	95c each.

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haps a quart—the same as you would use for small chicks in a brooder; put the feed in when quite warm and set it over the broodnest on the frames, then put an empty super on, and cover the feeder up with something warm; then put on the hive-cover, and it will have to be a pretty cold day to stop the bees from taking the feed. This is a good way to feed bees in a small way, for there is no leaking or chance for robbing.

CHAS. W. CILLEY.

Merrimack Co., N. H.

Not Wintered Well.

Bees have not wintered very well here. The winter was long and severe. Bees were confined without a flight for about 21 weeks. Bees kept out-of-doors were confined about 18 weeks. We had a snow-storm last night, and the ground was covered this morning; in some places the snow is piled up from 2 to 3 feet deep, but it is disappearing. I hope for a good season after this. Clover looks well.

CHAS. B. ALLEN.

Oswego Co., N. Y., April 16.

Hard Winter for Bees.

The bees in this locality have had a hard time the past winter, and they are having a poor time of it yet. All the bees that were not protected are dead, and a good many that were protected. There is not much cellar-wintering here, but those that protect their bees put them into clamps packed with sawdust. Mine are in a clamp yet; it is too cold for them to fly, and we have had very few days that they could fly yet. We had a hard frost last night and the night before.

I think I will lose 20 percent of 136 colonies. And to all appearances the clover is nearly all killed—smothered by ice.

DANIEL STUART.

Ontario, Canada, April 14.

Wintered Fairly Well.

Bees have wintered fairly well—4 colonies dead out of 23. I put the bees out of the cellar April 4. M. B. EWING.

DeKalb Co., Ill., April 14.

Bees Wintered Well.

Bees wintered in fine shape on the summer stands, with only a quilt protection over the frames, and the entrances reduced to ⅜x2 inches. Bees carried in pollen Feb. 24. All had, and still have, an abundance of stores without feeding. My first swarm was on April 8. D. NEILSON.

Cleburne Co., Ala., April 16.

Propolized Cloth for Bee-Mittens.

On page 280, Miss Emma Wilson gives a little talk about gloves for women bee-keepers. May I take the liberty to tell the sisters how I used to make them, though I seldom use any?

Take a piece of cambric and use it as a cloth on top of frames. Change its position once in a while, so that one side will all be covered with propolis. Make the glove or mitten with a sheath for the forefinger, and the remaining fingers can all go in another sheath. Make them long enough and big enough to go half way to the elbows.

Bees can sting through such a mitten, but they don't care to; the scent of the propolis seems to please and disarm them. Have the propolis outside. Better put on several cloths, for sometimes the bees pick them full of holes. S. T. PETTIT.

Ontario, Canada.

Wintered All Right.

I think my bees have come through the winter all right, notwithstanding the cold, wet weather the last of March and nearly all through this month. I have lost only 1 colony out of 36 so far, and they are busy carrying in pollen to-day, and have been for 2 or 3 days. I winter bees on the summer stands, in single-wall hives, with a cushion over the

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Spring Hill, Tenn., May 6.

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frames filled with planing-mill shavings. I run out of shavings, so I filled part of the cushions with oats, and they seem to have done as well as the others.

White clover seems to have come through the winter all right, and is beginning to show up quite green. Fruit-trees are not in bloom yet; they are very backward. The bees are getting pollen from cottonwood and box-elder, which are the first trees to start.

I think I shall try for extracted honey this season, at least in part. J. M. LINSCOTT.

Gage Co., Nebr., April 30.

CONVENTION NOTICES.

Illinois-Wisconsin.—The northern portions of the Northern Illinois and Southern Wisconsin Bee-Keepers' Associations will hold its spring meeting May 24, at 10 a.m., at the residence of J. W. Johnson, Davis, Ill. Farm joins town on north. All bee-keepers are cordially invited to attend. J. W. JOHNSON, Sec. and Treas.

Texas.—The Texas State Bee-Keepers' Association will meet at College Station, Tex., Tuesday, Wednesday and Thursday, July 5, 6 and 7, 1904, beginning at 10 a.m. on Tuesday. This will be during the meeting of the Texas Farmers' Congress, so it will be a great time. Railroad rates and board will be cheap. On the bee-keepers' program will be the following:

What are the essential qualities for making a successful bee-keeper? — L. Stachelhausen. Present standing of foul brood in Texas.—Louis H. Scholl. The 4x5 section super and its advantages—Dr. J. B. Treon. Natural or artificial increase—which is the best?—W. O. Victor. The shallow, or divisible, or the regular Langstroth—which?—W. H. Laws. Production and proper grading of section honey—W. E. Crandall. Importance of uniform standard cans for Texas—Udo Toepperwein. Criticism of the Laws' baby nuclei for mating queens—Discussion led by O. P. Hyde. The St. Louis convention, and when and how to go.—H. H. Hyde How many colonies will a good range support, and what should the bee-keeper pay for such location?—J. K. Hill. Successful management of out-apiaries—Carl Wurth.

The convention will open at the time named. Come early and take part.

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Bienen-Kultur, by Thomas G. Newman.—This is a German translation of the principal portion of the book called "Bees and Honey." 100-page pamphlet. Price, 25 cents.

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Dr. Howard's Book on Foul Brood.—Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cents.

Winter Problem in Bee-Keeping, by G. R. Pierce.—Result of 25 years' experience. Price, 30 cents.

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HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, May 9.—The market has an over-supply of comb honey, very little of which will pass as No. 1 grade—price is 11@12c per pound, and off grades at a corresponding value. Extracted, 6@7c per pound for best grades of white; amber colors, 5@6c per pound. Beeswax, 30@32c. R. A. BURNETT & CO.

CINCINNATI, O., April 18.—The honey market continues to be dull; if anything, the prices on comb honey are lower; concessions are made on bigger lots. I quote: fancy white comb from 12½@14c. Sales on extracted are made at the following prices: Amber, in barrels, 5¼@5¾c; in cans, ½c more; alfalfa, water-white, 6@6½c; strictly white clover, for extra fancy, 7½@8c. Beeswax, 30c.

C. H. W. WEBER.

PHILADELPHIA, May 9.—There has been very little demand for comb honey the last two weeks, and prices are about the same. The commission men are not refusing any reasonable offer. We quote: Fancy, 12@13c; No. 1, 10@11c; buckwheat, 8@9c. Fancy extracted honey, 7½c; amber, 6½c. Beeswax, 31c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

ALBANY, N. Y., April 25.—Honey market is very dull. Stocks of both comb and extracted are lighter than we thought would be a month ago, when we thought we would have to carry over the season. The demand for honey here will be light until the new crop comes. Quotations are nominally—8@13c for comb, and 5@6c for extracted. H. R. WRIGHT.

CINCINNATI, April 18.—The honey market here is reassuming activity, and judging from present indications, and the lateness of the season, the last season's crop will be consumed before the arrival of the new. Amber extracted in barrels and cans, 5½@6½c; white clover, 6½@8 cents, according to quality and package. Fancy comb honey sells at 12@15c. Beeswax, 30 cents. THE FRED W. MUTH CO.

BOSTON, May 14.—The demand for honey is extremely light, almost nothing, and supplies are heavy for this time of the year, and our prices therefore are largely nominal. We quote fancy white at 15@16c; A No. 1, 14@15c; and No. 1, 14c, with no call for under grades. Extracted, from 6@7c. BLAKE, SCOTT & LEE.

KANSAS CITY, April 18.—The demand for honey is a little better than it has been. Prices on strictly fancy comb are $2.50 per case, if not candied; the great trouble with the majority of honey coming from the West at present is that it is more or less candied, and about $2 00 to $2.25 is all we can get for it; amber is selling at $2.25 per case. Extracted is dull at 5@6c. Beeswax in good demand at 30c.

C. C. CLEMONS & CO.

NEW YORK, April 18.—There are no new features in the honey market. Some white honey is selling at from 12@13c; off grades at from 10@11c, and no demand for dark honey whatever. Market is very quiet on extracted of all grades, and prices are rather irregular. Beeswax very firm at 29@31c.

HILDRETH & SEGELKEN.

SAN FRANCISCO, April 27.—White comb, 1-lb. sections, 11½@12c; amber, 8@10c. Extracted, white, 5¼@5¾c; light amber, 4¼@4½c; amber, 3¾@4¼c; dark amber, 3¼@3¾c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

A shipment of 300 cases extracted went forward the past week per steamer for Germany. Local trade is of light proportions. Quotable values remain as previously noted, but market is not firm at these figures.

HONEY AND BEESWAX
When consigning, buying or selling, consult
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AMERICAN BEE JOURNAL

MASSACHUSETTS AGRICULTURAL COLLEGE

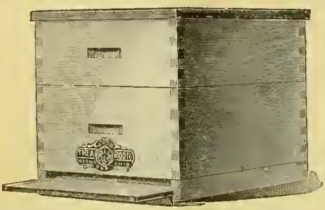
44th Year. CHICAGO, ILL., MAY 26, 1904. No. 21.

HOME APIARY OF M. R. KUEHNE, OF LOS ANGELES CO., CALIF.—See page 373.)

HOME OF MR. W. A. PRYAL, NEAR OAKLAND, CALIF.—(See page 373.)

THE VOICE OF THE PEOPLE

DANZENBAKER'S HIVE.



MORE HONEY. BETTER PRICES.

WE HAVE TOLD YOU SOME THINGS

—ABOUT THE—

DANZENBAKER HIVE

FOR COMB HONEY.

NOW SEE WHAT OTHERS SAY.

MORE HONEY.

UNION BRIDGE, MD. Feb. 9, 1904.

The A. I. Root Co., Medina, O.

Gentlemen:—I saw in a recent issue of your paper that you have a department called "Reports Encouraging." I shall send you my report.

I use the Danzenbaker hiv and will give you report of the same, as the few dovetailed hives that I use do not compare at all with the Danzenbaker. One colony gave me over one hundred pounds No. 1 white honey and the rest averaged about sixty, with an increase by natural swarming of one hundred per cent. A friend of mine who uses all sorts and kinds of hives in his apiary succeeded in making scarcely enough honey to pay for the foundation used in the sections. This was about two miles from my apiary. Long live the Danzenbaker hive! It is just the thing for this locality.

Yours truly,
J. B. HOLLOPETER.

MALLET CREEK, O., Sept. 25, 1902.

I have now 250 colonies of bees, of which 170 are in the Danzenbaker hives, and shall have all my bees in Danzenbaker hives next spring. During this past poor season, 30 or 40 of the colonies in the Danzenbaker hives gave over 100 lbs. surplus. On the average I get more than double the amount of honey from these colonies that I do from those in the old chaff hives. With a 7-inch telescopic cover, the Danzenbaker hive winters the bees better than the chaff hives.

VERNON BURT.

MORE HONEY AND BETTER PRICES.

I have used both square and tall sections in all my apiaries five years, and know from practical experience that it will pay to discard the 4¼ sections, and use only 4x5 sections, and the Danzenbaker hive with the fence separator. They have made enough more this season in the same yard to pay for the hives. I have made *more money* this season per hive than I have any previous year in my 15 years of bee-keeping. Fifteen of my strongest Danzenbaker hives made me a ton of honey. When it comes to sales I get more for the 4x5 sections, and have no work in cleaning them. I ship them as I take them from the super. This is not the case with the 4¼ section. I make honey to sell, and anything that sells the best, and for the most money, is what I want out of the bee-business.

S. D. MATTHEWS.

In Gleanings, p. 931, Dec. 15, 1899.

MOUNTAIN VIEW, N. J., Oct. 6, 1897.

I have run my hives largely with the Danzenbaker sections this year, and shall increase my facilities for the Danzenbaker output next year. I sold all my fancy clover in Danzenbaker sections, glazed, to two fancy grocers in New York, at 20 cts. a section; were retailed at 25 cts. each. My 4¼ sections, unglazed, sold to grocers at 12½ to 13 cts., retailing 16 cts. I furnished cartons with the 4¼, which cost nearly as much as glass.

B. F ONDERDONK.

BETTER PRICES FOR DANZY. HONEY.

ROCK VALLEY, N. Y., Feb. 22, 1901.

My bees gathered no surplus after July 1. I had only 1200 lbs., but I obtained a fancy price—15½ for "Fancy" and No. 1 white, and 14½ for No. 2 here at my station for all the Danzenbaker 4x5 plain sections, used on your hives, while I got only 14 and 13 cts. per lb. for the 4¼x4¼ square sections, and I consider that much difference is worth looking after—don't you? The Danzenbaker hives doubled up, two brood-chambers, are in fine condition, even better than my double-walled hives. I intend to build a bee-cellar and work off my double-walled hives as fast as I can, and get the Danzenbaker hives.

Very truly yours,
J. L. HAIGHT.

It is not claimed that so large an advance in price as is mentioned above can usually be obtained for honey in Danzenbaker sections, but because it is more uniformly fancy grade, and of general better appearance it commands the highest prices and a more ready sale in a dull market than ordinary honey.

A RECENT ORDER.

INDIANAPOLIS, IND., Feb. 3, 1904.

The A. I. Root Co., Medina, O.

Dear Sirs:– Please ship to me as soon as convenient: 500 Danzy. AD64M hives.

Yours,
WALTER S. POUDER.

(This is in addition to all other orders.)

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Mr. Danzenbaker's little book, "Facts About Bees," containing 70 pages, giving full particulars regarding this hive and system, is indeed full of facts. If one follows the directions clear through, he is sure to produce a strictly first-class article of comb honey, providing of course there is any honey to be had. This unique little book will be sent free to all who apply for it.

Bee-keepers are raising honey for the money there is in it, or for the pleasure they get out of it. It is conceded by all who have tried this system that it is highly profitable. Reading over letters from the users of this hive who tell of securing large crops of honey almost free from propolis makes us think that the bee-keeper who is in the business for pleasure would be highly gratified with the hive also. What is more satisfying than to take off well-filled supers of snow-white sections free from the propolis that is so often found on sections in cases that are poorly constructed and adapted for the production of a fancy article?

SPECIAL NOTICE.

The great popularity of the Danzenbaker hive has brought the shallow brood-frame and the tall plain sections into prominence. It must be remembered that no other hive contains the essential features of the Danzenbaker. The success of this system depends on having everything just right, so you should place your order for the Danzenbaker hive with our main office, or any of our branches or regular agents.

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(See list of Jobbing Agents in American Bee Journal, Jan. 7, page 2.)

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BEE JOURNAL
Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor. CHICAGO, ILL., MAY 26, 1904. Vol. XLIV—No. 21.

Editorial Comments

A Plunger in Bee-Keeping.

Henry E. Horn reports in the American Bee-keeper that a California millionaire has been buying up apiaries wholesale in Southern California for the last six months, and now owns 12,000 colonies, scattered over six counties. Mr. Horn grimly observes, "He will probably not borrow any trouble from anybody for some time to come."

Drones in Worker-Cells.

The fact that one or more drones have been found reared in worker-cells by queenless bees to which eggs in worker-cells had been given, has been adduced as proof that the workers decide the sex, and can produce at will from the same egg either a worker, queen, or drone. But every observing bee-keeper of experience must have noticed in a comb of sealed worker-brood an occasional cell with raised capping, showing that it contains a drone, and this, too, at a time when drones are not desired. Especially is this the case with a queen growing old, the numbers of such cells increasing with the age of the queen until she becomes a drone-layer pure and simple.

Honey-Thief Caught, Convicted, and Sentenced.

We have received the following from Mr. F. D. Lowe, of Kern Co., Calf., which is self-explanatory:

EDITOR AMERICAN BEE JOURNAL:—
A duplicate of the clipping herewith inclosed and the following letter have been mailed to Gleanings for publication, and I trust that it may be a lesson to all would-be honey-thieves.

Yours truly, F. D. LOWE.

The letter referred to reads as follows:

EDITOR GLEANINGS:—The clipping herewith inclosed gives the full result of the trial of a honey-thief which I am pleased to send you as per your request.

I also desire to state to the Board of Directors of the National Bee-Keepers' Association—of which I am a member, and to whom I applied for assistance in the prosecution of this case, and the same being refused—I challenge the records of the said Association to refer to just one case of thieving that was more deserving of prosecution than the case of burglary by B. F. Hoy, who stands convicted. A man who has terrorized this community for years; a man who was feared, and that dared not be prosecuted by his victims, has at last met the ends of justice at my own personal expense.

He was sentenced by Judge Bennett, May 7, to 10 years in Folsom Penitentiary.

Yours respectfully,
F. D. LOWE.

We give herewith a few of the paragraphs of the clipping mentioned in the above, which appeared in the Daily Californian, dated May 5, 1904:

HOY IS CONVICTED—WESLEY PLEADS GUILTY.

Before Judge Bennett this afternoon Leonard G. Wesley, nephew of B. F. Hoy, who was yesterday convicted of burglary, plead guilty to burglary, and was sentenced to serve one year in San Quentin prison. There was an affecting scene in the court room when the young man, 23 years old, led astray by his relative, appeared before the bar of justice to receive the sentence of the law. His faithful young wife and his baby were by his side, the child nestling in her father's arms and the young wife sobbing by his side. District attorney Laird and Special Counsel Charles N. Sears joined with the prisoner's counsel in asking the court to show leniency to him.

Wesley was the companion of Hoy in his raid on the farmers of Rosedale, that ended in the elder's conviction yesterday. He came here some two years ago, and through his relationship to Hoy fell under his influence.

F. D. Lowe, the complaining witness, was called to the stand, and told the story of the crime in a few words, and Judge Bennett announced that he would consider the crime as burglary in the second degree.

While the attorneys were speaking Wesley broke down, and burying his face in his hands, sobbed. His baby toddled to his side and clung to him, as though even to her mind there was something wrong.

Judge Bennett then ordered the prisoner to stand up. He did so, and the court asked him if he would promise to amend his life and do right for the future, and he replied that he would. The sentence of one year, the lowest penalty allowed by the law, was imposed, and he was led away to jail while court adjourned.

The conviction of Hoy is regarded as a victory for the law and its supremacy. He has been accused of misdeeds several times before, but never convicted of any crime. When he was arrested with the property stolen from Mr. Lowe on his ranch, prompt action was taken by the robbed man. He personally pursued the marauders into the mountains, and with Deputy Sheriff Johnston he tracked them to their ranch, recovered the goods, and gathered evidence to convict them of the crime. He also employed special counsel for the people at his own expense, and must have spent much more than the value of the stolen property.

We think Mr. Lowe is to be congratulated on the outcome of his effort to put an end to honey-thieving in his locality. Of course, we do not know on what ground the Board of Directors of the National Association declined to aid Mr. Lowe, but we suppose they had a good reason for refusing.

Radium for Foul Brood.

Radium has proved itself efficient in the destruction of various microbes, and D. M. M., in the British Bee Journal, expresses the hope that as time moves on, improvements may be made and the material so cheapened that radium may come to the aid of the bee-keeper in his struggle with foul brood.

Phacelia Tanacetifolia.

As the result of a large number of observations collected, the Praktischer Wegweiser reports that the overwhelming evidence shows phacelia to be a honey-plant of the highest value, but views conflict as to its value for forage.

"Who is Mrs. Berthe?" Answered.

We have received the following reply to our question as to who Mrs. Berthe is, who has been appointed superintendent of the apiarian department of the St. Louis Exposition. Our good friend, Mr. H. G. Acklin, of Ramsey Co., Minn., writes thus:

EDITOR AMERICAN BEE JOURNAL:—
"Who is Mrs. Berthe?" was the first thing my eyes caught on opening the American Bee Journal of May 5.

Friend York, I have for several years been at you to visit the bee-keepers of Minnesota, and should you do so, it will be your pleasure to meet some of the nicest people in the world, and Mrs. Fannie N. Berthe is one of them. For several years we have had the pleasure of her acquaintance, and she is a lady worthy of the position she now holds. She is a practical bee-keeper, and has always taken an active part in the good work the Southern Minnesota Bee-Keepers' Association is doing, and now is working hand in hand with the Minnesota Bee-Keepers' Association for the good of all Minnesota bee-keepers, and I believe she will do so for all bee-keepers who wish to make an exhibit at St. Louis.

Last winter I had the pleasure of meeting Mr. Berthe and their son, about 20 years old, and the house is not one-sided, I can assure you.

If you think no one in Minnesota is worthy of such a position, just make us a visit and you will be agreeably disappointed. Minnesota is full of good people, and the bee-keepers have their share of them. Mingle with us, and you will find out. H. G. ACKLIN.

One usually learns by asking questions. We could not find Mrs. Berthe's name in the list of members of the National Bee-Keepers' Association, neither among the subscribers of the American Bee Journal. So we concluded that she couldn't be a very prominent bee-keeper, especially as we did not remember hearing of her during the last 20 years. Of course, there are thousands of excellent bee-keepers that we do not know, but we submit that any one who has not taken enough interest in bee-keeping to have been for years a member of its National organization, nor to be found on the list of readers of the oldest and only weekly bee-paper in America—well, does any one wonder that we had to ask, "Who is Mrs. Berthe?"

We know very well that Minnesota has many prominent bee-keepers, and Mr. Acklin is one of them. Had he or some other leading Minnesota bee-keeper been appointed to the apiarian position at St. Louis, we would have had no occasion for surprise. Mr. Acklin has also attended some of the meetings of the National Association, his good wife even appearing on its program. But we have attended every meeting during the last ten years, and never had the pleasure of seeing Mrs. Berthe there.

For ought we know, Mrs. Berthe may possess every qualification for filling very successfully the position to which she has been appointed, but we should suppose that such appointment would be made from among persons who had won at least a little national distinction in the industry they are called on to represent. Surely, among the Board of Directors of the National Bee-Keepers' Association are men that have even made sacrifices for the good of bee-keeping, and are deserving of recognition therefor.

We trust the reader will understand that there is not the least personal feeling in this matter on our part, only we must confess to not a little surprise when we learned that some one had been appointed superintendent of the apiarian department of the great St. Louis Exposition who was not known outside of her own State!

While it is true that Mr. Acklin has kindly urged us to visit the bee-keepers of Minnesota, it was always, we believe, at a time when our Chicago-Northwestern convention was in session, and as president of it we could not very well be absent. We should very much like to meet the Minnesota bee-keepers some time, including Mrs. Berthe, for the American Bee Journal being the only bee-paper that pays especial attention to women bee-keepers, naturally we would have a warm spot in our heart for them. Nevertheless, we feel justified in feeling that a more prominent and better-known bee-keeper should have been honored with the appointment referred to, whether that person be a lady or a gentleman.

Now, after speaking thus freely, and we trust kindly, we wish to assure Mrs. Berthe that if there is anything the old American Bee Journal can do to help make her work a success, all she needs to do is to call on us, and any assistance we can render will be cheerfully given. We want to see her succeed in her position, and show to the visiting world what American bee-keeping means, and what it is to be.

LATER.—Since the foregoing was written, we have received the following from the St. Louis World's Fair, which explains itself:

ST. LOUIS, U. S. A., May 10, 1904.

EDITOR AMERICAN BEE JOURNAL:—

Dear Sir:—Noting your editorial inquiry as to the identity of Mrs. F. N. Berthe, who is in charge of the Bee-Exhibit at the World's Fair, I beg to say that Mrs. Berthe comes from ———, Minn., where she has a small apiary which has been very successful. She has been engaged in the culture of bees for 20 years, and has devoted her time to the importation and improvement of bees and the management of apiaries.

Mrs. Berthe has been superintendent of the honey and bee department at Winona fairs for the last five years. She is a thoroughly practical bee-culturist, and was selected for the superintendency of the exhibit after the careful consideration of available names.

Very truly yours, MARK BENNITT,
Manager General Press Bureau.

The above is quite satisfactory to us, now that it is known that Mrs. Berthe was appointed "after the careful consideration of available names." Success to Mrs. Berthe.

Miscellaneous Items

Messrs. Henry Alley and F. Danzenbaker have recently been married. Our congratulations to both of them and theirs.

* * *

Have You Bees for Sale?—There seems to be a good demand for bees this spring. If any of our readers have bees for sale, we would suggest offering them at once in the American Bee Journal. Our advertising rates are very reasonable, and we will be pleased to send them on application.

* * *

"The Honey-Bee: Its Natural History, Anatomy, and Physiology," by Mr. Thos. Wm. Cowan, of England. We have received a beautiful souvenir edition of this work from its able author. It is printed on enameled paper, and bound in red leather with gold letters and design. In appearance it is a beautiful work of the printers' and book-binders' art; and as to contents—well, it needs no further recommendation than simply the author's name. He has our thanks for the book, which we shall prize.

* * *

H. C. Morehouse, of Boulder Co., Colo., writes that with the assistance of an 18-year-old boy, he expects to manage 600 colonies of bees for comb honey, located in 8 apiaries, without any additional help except for casing honey. He thinks this will keep him out of mischief for the next four months. Quite likely. But as he is relieved of the work of getting out the Rocky Mountain Bee Journal (having recently sold it to Mr. P. F. Adelsbach, of California, publisher of the Pacific States Bee Journal), he will have more time to devote to his bees. Mr. Morehouse says that Mr. Adelsbach has a nice lot of readers in his combined list, and being located in a field that he believes needs and will support a bee-paper of its own, he will be surprised if Mr. A. does not make it a success. Evidently he (Mr. A.) has the opportunity, and will doubtless make the most of it.

* * *

Hon. E. Whitcomb, of Saline Co., Nebr., surprised us with a call last week. He had been visiting about a month in New York and Pennsylvania, and was on his return journey. Mr. Whitcomb is a member of the Board of Directors of the National Bee-Keepers' Association. He is the bee-keeper who so gloriously "got religion," as the result of a revival meeting in his home town last August, that he was thoroughly cleaned up on the use of tobacco, profanity, etc., and now teaches an adult Bible class of 35 in the Methodist Sunday-school. There is no doubt about it. Mr. Whitcomb got the genuine article—"pure and undefiled"—and says he is now trying to make up for over 50 years of wasted life. As he was a noble and brave soldier in the ranks during the Civil War, so he is equally valiant and courageous serving under the conquering banner of the King of Kings.

* * *

Gen. D. L. Adair, of Kentucky, died of heart failure at the age of over 80 years, on April 19. He was the inventor of the Adair bee-hive. In referring to him, and his interest in matters apiarian, Mr. A. I. Root had this in Gleanings for May 1:

I shall have to explain to our younger readers that Gen. Adair was at one time, some 30 years ago or more, one of the brightest and most valued writers for the American Bee Journal. It was he who gave us the Adair frame; and Adair and Gallup together gave us what was called the "Long-ideal hive." If I am correct, it was Mr. Adair himself who first suggested that, instead of making the hive two or three stories high, we simply lengthen it out like a watering-trough, adding surplus combs to the back end opposite the entrance as fast as they were needed, according to the growth of the colony and the amount of honey coming in. Just now I recall only one apiary that is managed in this way. Our friend, O. O. Poppleton, of Florida, still uses this arrangement very successfully. He claims he gets just as much or more honey, and he also obviates the necessity of lifting off an upper story, which his strength will not permit him to do. Gen. Adair was a vigorous writer, and I believe he was a successful bee-keeper.

During the time he was actively engaged in apiculture, and writing for the journals, he did much to stir up an interest in apiculture, and to turn deep thinkers and experimenters into channels that might not otherwise have been explored.

About 30 years ago I had a chromo made of a hexagonal apiary, each hive being shaded by a grape-vine. At that time I planned a standard extractor, a standard hive, and a standard frame. My standard frame at that date was the Adair 11¼x13⅜; and the standard hive was made long enough to hold 20 frames one story high, the entrance being at one end. At that time I endeavored to get the bee-keepers of the world united on a standard frame, and suggested the above dimensions. Very soon I found out, however, I had made a mistake. There were not only more frames of the Langstroth dimensions in common use than any other, but the majority of the bee-keepers preferred the Langstroth size to any other; and, if I am not mistaken, the same has held good during all the 30 or more years since then.

Another of the veteran bee-keepers and writers has been called to to his long home—another reminder to those of us who are getting well along in years, that our stay in this world is coming to a close. Peace to the ashes of Bro. Adair.

An Apiary of M. R. Kuehne appears on the first page. He wrote us as follows when sending the picture:

This picture represents my home apiary of 200 colonies of bees, situated just outside of the city limits. One-half of the bees are run for comb honey, and the other half for extracted.

The house in the picture is the extracting-house, and contains one 4-frame Cowan extractor with 12-inch pockets, so I can extract 8 half-depth frames, as I use quite a number of Ideal supers for the brood-chamber, and find they give better results than the full-size Langstroth frames, especially for comb honey production and other necessary manipulations.

The storage-tank can not be seen in the picture, as it is directly under the house.

The man in the picture is my oldest son, "John," who has charge of this apiary, while I attend to another apiary of 100 colonies 23 miles away, in San Bernardino County, at which place I also run, in addition to mine, another apiary of 125 colonies, belonging to another man. This keeps us pretty busy during the honey season, and it is no child's play for a man of 60 years, but as I dearly love the work with the bees I find it no great hardship.

I commenced bee-keeping in California 7 years ago, with 5 colonies of bees, and poor health. To-day I am in perfect health, and have two good apiaries, and make a fair living out of bee-keeping.

M. R. KUEHNE.

We had the pleasure of meeting Mr. Kuehne at the Los Angeles convention. He evidently proved by his physica appearance what bee-keeping and a California climate will do for a man who takes good doses of both.

Mr. W. A. Pryal's "Daisy" Home is shown on the first page of this issue. In referring to the picture in a letter, Mr. Pryal writes thus:

The house is an old rambling cottage of ten rooms or so. But the photograph was not taken on account of the beauty of the shanty, but on account of—did I hear you say weeds in the foreground? Slow there, my boy! They are not weeds; they are what are called marguerites or daisies.

The tree with the large trunk is a red-gum (eucalyptus). The branch hiding the roof on the right is that of an almond. A Lamarque rose clings to a corner of the house, while two kinds of Lady Banks roses cover the porch. Palms and other trees fill up the remainder of the vegetable portion of the picture. But, say, did you ever see such daisies? No slang intended.

W. A. PRYAL.

No wonder Mr. Pryal is such "a daisy" himself, when we see how he has lived among the daisies so long.

But what a charming spot that old home must be! And what tender memories must be entwined among those roses, the eucalyptus, palms, and—yes, daisies. Could one imagine a more appropriate place where could be applied the words, "Home, Sweet Home?"

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we have used it ourselves.

PRICES, prepaid—Sample copy free; 10 for 20 cts.; 25 for 40 cts.; 50 for 70 cts.; 100 for $1.25; 250 for $2.25; 500 for $4.00; 1000 for $7.50. Your business card printed free at the bottom of the front page, on all orders for 100 or more copies. Send all orders to the Bee Journal office.

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

Contributed Articles

Do Queens Mate More Than Once?

BY DR. C. C. MILLER.

MR. P. H. HARBECK desires to hear from myself and others as to the possibility of a queen mating more than once. My personal testimony in the case can only be negative. In all the years of my bee-keeping I never saw a case in which I could be sure that a queen mated more than once. But it will hardly do to be too dogmatic and say that because we have never seen a thing it is impossible that any one else could have seen it. Of the thousand of queens I have had fertilized, I have seen very few return from the bridal trip, and in no case could I be positive that a second excursion was not made.

There have been mentioned in the European bee-journals some cases in which a second mating was said to have occurred, and it so happens that in the last number of Gleanings, page 385, comes a case exactly in point, where no less authority than Prof. Frank Benton gives minute particulars as to two cases in which a second mating took place, in which he is absolutely positive that there could be no mistake.

After all, why should such a thing be considered so very strange? Is it not the usual thing in the whole animal world that mating occurs more than once? Why should bees be an exception?

I am a little surprised to find some of Mr. Harbeck's observations so much at variance with the observations of others. He speaks of the meeting of the queen and drone as if it were a thing he had witnessed a number of times. That bespeaks very long familiarity with bees on the part of Mr. Harbeck, for it is not likely that one bee-keeper in a thousand ever saw a case of the actual meeting of queen and drone, to say nothing of a number of cases. One expects, therefore, great familiarity with the habits of bees in other respects, and yet the behavior of Mr. Harbeck's bees seem different from the behavior of bees in common. It is possible that he has not been as careful in his observations as he might have been.

He says: "When a prime swarm issues there are two or three queens ready to come out. While it is not always the case, it often happens." As a rule, no young queen is ready to leave her cell until several day after the issuing of the prime swarm. Stress of weather may cause delay, but the case would be very rare in which swarming would be delayed until the emergence of the first young queen.

Then Mr. Harbeck speaks of the young queen flying out on her bridal excursion as soon as the old queen leaves, another queen emerging, and this latter queen killing the first one on her return. If he will observe a little more closely he will probably find that his bees do just as other bees, that the young queen gives no thought to her nuptial flight till all rivals are out of the way, either in or out of the cell, and that the dead young queens he finds in front of the hive will not be found with marks of impregnation.

McHenry Co., Ill.

Indoor and Outdoor Wintering of Bees.

BY C. P. DADANT.

Do you think the winters are too long in this part of the country where the ground freezes the first half of November and does not thaw out until the first half or middle of April, although the flowers do not begin to bloom until May? Of course, the temperature is quite severe in the middle of the winter, but that will not cut any figure if bees are kept in a cellar, or other proper place.—J. EDWARD BLAKE, Becker Co., Minn.

For a number of years I have contended that we are here on the north limit of safe outdoor wintering. When the winters are mild the cellar-wintering in our section is unsatisfactory, owing to the inability to keep a cellar cool enough for the bees to remain quiet. In addition to this difficulty, the warm winters produce too much moisture, the cellar becomes damp and the bees suffer, the combs that are not covered by them become moldy. But in the North, where the above inquirer is located, there is no such trouble. When the cold weather begins, it is rarely interrupted by a thaw. The bees that are put in the cellar can easily be kept quiet and content by regulating the temperature with more or less ventilation, as the occasion may require. When the thaw comes, and the bees are put out, there is but little danger of a change for the worse, and they usually go to breeding without interruption. So I have advised all living in the North to practice cellar-wintering. Here, if we could know beforehand whether the winter will be warm or cold, there would be but little trouble, and the bees would do well almost invariably, by being put in the cellar during cold winters and left out-of-doors in warm ones.

The past winter has given a very good lesson for all those who are willing to learn and heed the teachings of practical experience.

In many spots bee-keepers have lost heavily in outdoor wintering, while their neighbors wintered their bees safely.

The danger in wintering out-of-doors can be laid to three or four causes. As a matter of course we all know that it is necessary to have strong colonies. This is the A B C of the art, and the first thing that a beginner should be taught. Better go through the winter with 10 strong colonies than with 20 weak ones.

The quality of the honey is the next requirement. In Europe, as well as here, it is now universally recognized that the bees must have good, mature, heavy honey. Fruit-juices, honey-dew, dark honey of all sorts, are injurious because they contain many foreign substances which load the intestines of the bees and compel them to leave the cluster in order to discharge the contents of their abdomens, during cold days. An occasional bright and warm day, during which the bees can have a few hours of flight, relieves them; but a colony is certainly better off with good honey during a six weeks' confinement than it would be with a low grade of food during a three weeks' stay in the hive.

Warm and dry quarters are indispensable. If the hive is very populous, the bees will stand an extraordinary amount of cold, and will come out with but little loss, but the high polar winds of our plains are injurious, because they penetrate into the crevices or the entrance and reach the edge of the cluster, and a cold, still temperature is preferable to a windy exposure. Dryness is needed, and more important than many imagine. That is why so many of us use absorbents in the upper story—chaff, forest leaves, saw-dust, woolen rags, etc. These materials do not allow any of the heat to pass off, but absorb the moisture and prevent it from condensing over the combs and forming frost, which in damp days will thaw and wet the bees. The damage done by an excess of moisture is rare, but I have seen dozens of colonies destroyed by it in very severe winters.

We used to keep an impervious enamel cloth over the top of the combs during the winter, as we do in summer, but during one winter we lost a large number of colonies, and in nearly every case the bees were literally drenched by the moisture that had been produced by condensation and subsequent thaw. The colonies that came out safely were those in which the enamel cloth was imperfect—had been gnawed by the bees so as to allow the moist air to discharge its moisture into the warm covers of chaff or leaves placed over the cluster. In every case where the cloth had remained impervious to the moisture the bees had suffered, while in almost every case where the moisture had been able to pass up into the upper story the hive was in a healthy condition at the end of the cold weather. So, since that time we have made it a practice to remove the impervious ceiling and replace it by straw, or wool, or leaves. In the winter just past I have been informed of several cases of failure, where the bees had been destroyed by too great a condensation, which, in thawing during the first milder weather, had dampened the combs so that the bees had died.

It is also very important that a large portion of the winter's supply of honey be within reach of the bees, just above the cluster. When the weather is very cold, and the bees are not within reach of a sufficient amount of food just above them, they may starve even with honey on the same comb, but too much to the side. This is one very clear defect of the shallow hives. The colony which has *depth* of combs instead of *width* will have a greater amount of stores over the cluster, and will live through, while the colony in shallow combs will die with plenty of stores in other parts of the hive. I believe this accident has happened this winter to most of those who have lost bees. The honey was good, the colonies were strong, but, the winter having been severe, the consumption was greater than usual, and many good colonies have died with honey in their combs, but out of their reach.
Hancock Co., Ill.

Are Queens Mated More Than Once?

BY DR. G. BOHRER.

On page 317, P. H. Harbeck asks the question: Are queens fertilized more than once? He further says that under no conditions can a queen be mated more than once. It seems that he regards mating and fertilizing as one and the same thing. While mating is one thing, fertilization is entirely another. A queen may be mated and not become fertile as a result. He also calls attention to a case of twice mating reported last year, by a bee-keeper, and guesses at what happened instead of twice mating. Please permit me to state that I am that bee-keeper. And let me assure him that he has it entirely different from what the situation really was.

The queen in question was reared by a large nucleus which was entirely without the means of rearing more than one queen, and I gave them a finished Italian queen-cell, from which the queen emerged inside of a week after it had been inserted, or they never could have reared a queen. She was the largest queen I ever saw, and one of the most beautiful. On the seventh day after hatching, at about 3 p.m., I sat down near the entrance of the hive, and in a short time saw her leave the hive, and on her return she bore white fragments of the genital organs of the drone. The next afternoon I was trapping and destroyed a lot of drones as they came out of this hive, there being more than I wanted, the queen, as I supposed, being fertilized. In a short time this same queen flew down upon the alighting-board as on the day before, and bearing the same evidences of having been mated that she did on the previous day.

I had read the works of Mr. Langstroth, Quinby, King, Cook, Miller and Root, and had been one of the first readers of the American Bee Journal. I bought my first Italian queen from Mr. Langstroth in 1864, and began rearing queens in Indiana that year, and sold many queens between that date and 1873, when I left Indiana; and in all my reading and experience I had never had an intimation that a queen had ever been known to mate more than one time. This case was a new one to me, and I reported it to Dr. Miller, he having an extensive experience. He stated that he had never known a case of the kind in this country, but that he had heard of cases in the old world, but said this case was interesting on account of its rarity. He reported it through the American Bee Journal, but omitted my name.

This queen might have proved to be fertile had she left the hive but once, but that the same cause that prompted her to make her first bridal trip, doubtless led her to make the second. As all agree, I think that a queen never leaves the hive excepting for two purposes—the one to meet the drones, and the other in company with a swarm; but all I have got out of this discovery is, that I will not in the future destroy drones until after a queen begins to lay eggs. More than one mating may be of more frequent occurrence than is generally known.
Rice Co., Kan.

Convention Proceedings

The Elgin County, Ont., Convention.

The Elgin Co., Ont., Bee-Keepers' Association met in annual session at St. Thomas, April 30. Among those present were, R. F. Holtermann, W. J. Craig, F. A. Gemmill, R. H. Smith, W. J. Robb, Morley Pettit, Alex. McLellan, Wallace Smith, Wm. Gibbs, James McFarlane, Wm. Martin, and Messrs. Glenn and McKenny.

After the reading of the minutes by Secretary Robb, the members present reported their successes and failures in wintering bees. Losses owing to the severe winter have been generally heavy, but clover is reported to be in fair condition.

PRESIDENT'S ADDRESS.

In his opening address, Pres. Morley Pettit said:

"We meet to relate our experiences and help one another solve the difficult problems of our profession. Dependent as it is upon soil and climate conditions, as are all industries, directly or indirectly, our business is a precarious one, and requires close attention and careful thought. The winter season, whose close we hope to see soon, has been very trying on the insects in which we are particularly interested. For nearly five months they had no flight, and during that time there was an unusual amount of cold, stormy weather, zero and below. At the present time the spring is fully a month later than usual. Comparatively speaking, little breeding is being done in the hives, and from the present outlook the colonies can not get into very good shape for the white clover, unless it, too, is late. However, no life or business is all a pathway of roses. Each has its trials and discouragements. "Up and it again" is the only way to success after apparent defeat. We learn by our failures; we gain strength by constant effort. Every cloud has a silver lining, and it's an ill wind that blows nobody good. The cry last summer was, 'Too much honey!' 'Demoralization of prices!' This will surely be righted the coming season by the shortage of bees. Old stocks of honey will be cleared out, and prices firmed up to a proper level. Then let all sell judiciously, hunt out neglected markets, and avoid overcrowding the large centers."

MARKETING HONEY.

Mr. R. H. Smith read a paper on "Marketing Honey," in which he said that honey is much more generally used in Canada as an article of food than it was some years ago; but the production of honey and competition in various ways has more than kept pace with the consumption, hence the prevailing low prices obtained for honey during the past year. The question may be asked: "What can compete with Nature's purest sweet at the same price?" As a medicine its value has long been recognized, and as an article of food a choice article of comb honey has no peer. It is, however, in the extracted form that honey has more competitors, and, judging by the advertisements of the manufacturers of the various syrups upon the market under the high-sounding titles of "Honey Syrups," "Honey Drips," "Clarified Honey," "Table Syrups Better than Honey," etc., they are all quite willing to borrow the good name of honey as far as they possibly can; and it is only by offering their products at a low price that they can be sold. Very few of the consumers of these articles have any idea how these syrups are made. They may know it is produced from corn, and if it has a good appearance and is cheap, it will sell. Perhaps it is not so generally known that sulphuric acid is used to convert the starch of the corn into glucose or syrup, and that it has not been found possible to remove all of the sulphuric acid from the finished product. Many may have seen the statement going the rounds of the newspapers that Mr. Rockefeller, who is largely interested in glucose or corn-syrup factories, is offering half a million dollars for a process that would remove the remains of the acid; and the reason for this is, the manufacturers know that unless this acid is removed, which is so injurious to the teeth and stomach of the consumer, they can not hope to increase their trade.

Honey is not advertised as freely as other foods; in fact, is scarcely advertised at all. The main reason for this is, that honey is, like wheat, a natural food (not being manufactured). If one advertises honey, it is about as much benefit to other producers, so it is not done. The best means of promoting the sale and use of honey is to produce a No. 1 article, to extract only when well capped and thoroughly ripe, keep the light and dark honey separate, and offer each for what it is. Some bee-keepers make the mistake of trying to get along with only one super or top story for extracted honey. I think this is a great mistake, because during a good flow bees will soon fill up one super with the thin nectar, and then have no place to store, so will wait until this is ripened before they can deposit more; where, if they had another super given at the proper time, both storing and ripening could go on simultaneously, and the bee-keeper would not be likely to extract the unripe nectar that will always lower the grade of his ripe honey.

The following resolutions were introduced and passed:

AGAINST ADULTERATION.

Resolved, That this Association pass a vote of censure upon Uptons, of Hamilton, for seeking to use the good name of honey for putting inferior goods upon the market, as shown by the Bulletin of the Department of Inland Revenue at Ottawa, and their analysis. That we put ourselves on record as being opposed to adulteration in any form, and that a copy of this resolution be sent to Uptons, and published in connection with the report of these proceedings.

BEET-SUGAR BONUS CONDEMNED.

Resolved, That we, as bee-keepers, put ourselves on record as condemning the policy of the Government in bonusing the sugar-beet industry to the detriment of the honey-industry, which produces a food much superior to sugar, to say nothing of the value of bees to the farmer and fruit-grower as fertilizers of blossoms. That a copy of this resolution be sent to the minister of agriculture at Toronto.

AGAINST SPRAYING FRUIT-TREES IN BLOOM.

Resolved, That this convention condemn the spraying of fruit-trees while in full-bloom, as an injurious practice and a waste of time, labor, and money, as well as a detriment to the honey-bee, an insect of value in assisting proper fertilization of the blossom, and likewise contrary to statute law.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Best Time to Put Foundation in Sections.

A reason that is not always thought of for putting in the foundation in the year's supply of sections early in the season, is the difficulty of putting in foundation in hot weather compared with cold weather. I never realized what a difference it made until last summer, when, on account of having a larger crop of honey than we expected, we ran out of sections, and I was obliged to put foundation in several thousand sections in hot weather.

I had always enjoyed putting in foundation, but I changed my mind about it when the warm foundation doubled up under my fingers and I was obliged to hold each full sheet until it was cool enough so that its own weight would not cause it to drop out. It was rather slow business compared with putting it in in cool weather, and not nearly as satisfactory, either, for I never felt quite sure whether it was going to stay where it was put or not.

The only way that I could accomplish anything was to get up at 4 o'clock in the morning and work for two or three hours before it got so warm, and that is what I did. About that time I decided that it would be the wise thing to have such a *big, big* lot of sections ready that there would be no possibility of having to put in foundation in hot weather.

The Golden Rule and Starting Apiaries.

On page 327, Mr. Ricketts asks whether a person who owns a piece of ground has not the right to start upon it an apiary, regardless of any surrounding bee-keeper or bee-keepers. Legally he has an entire right to do so, and at first blush one would say that one has the same right morally as he has to establish on his own ground a pig-pen. But there seems to be a belief quite common among bee-keepers, becoming constantly more common, that when a man is making a business of bee-keeping, with bees enough to utilize all the nectar within reach, it is not a nice thing for another man to plant right beside him another apiary.

It is perhaps an unfortunate thing that some plan has not been put in operation that would give legal right, by paying a certain amount, to a certain territory, but lacking that, the Golden Rule is a good thing to follow. Suppose Mr. Ricketts should make his living at bee-keeping, having his all invested in it, and then suppose a large land-owner should bring an equal number of colonies and plant them right close beside Mr. Ricketts, thus making the business of both an entire failure; would Mr. Ricketts feel that that land-owner had been strictly following the Golden Rule?

Honey that Seems to Be Yeasty.

In the South they seem to have some trouble with honey that is obtained from cabbage palmetto and perhaps from other sources, the honey never ripening in the hive, but working like yeast in the cells. Even if only a little of this acid honey is stored along with other honey in the hive, it makes trouble with the whole. Mrs. S. A. Smith, the Florida woman who was bright enough to invent a bee-brush, is also bright enough to turn to advantage this objectionable quality of the honey. She tells about it in the American Bee-Keeper. Any part of the honey intended for table use she puts on the stove and heats for at least six hours, but never hotter than to allow the hand to remain in it. The scum is removed, and this honey then has a caramel flavor, preferred by some to other honey.

But for cooking purposes she much prefers this acid honey raw. She says:

> I make all fruit-cakes and plum-puddings from it, and every one who eats them is sure to ask how they are made, and of what. I always use soda instead of baking powder, and as honey-cake must be baked slowly, that is much better, because it is slower to fall than the baking powder.
>
> The acid and soda make a complete raising combination, and is very much ahead of baking powder, and is very cheap, too.
>
> The cakes and puddings made from this honey would keep for months, and improve every day. For bakers' use, it would be the cheapest and best of any honey, for no cream-of-tartar would be needed in using it, and that is the most costly part of baking powder.

Recipe for Making Honey-Cookies.

One quart of honey, half-pound of white sugar, half-pound of butter, juice of two lemons. Stir this mixture very hard, then mix in slowly flour to make stiff paste. Cut into round cakes, and bake in buttered pans.—Mrs. J. V. Wood, in Chicago Record-Herald.

Hasty's Afterthoughts

The "Old Reliable", seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

STICKING COMB FOUNDATION WITH PASTE.

Arrah, there, now! With propolis and beeswax of our own haven't we stick-'ems enough without going outside. Here's a Colorado chap that must needs set his foundation with *paste!* If he will do so, and likes to see the frames standing around waiting for the paste to dry, I don't see what the rest of us are going to do about it. Page 206.

FREE-HANGING FRAMES.

Most of us, having given our adhesion to movable frames, want to "go the whole pig" and have them movable in reality. The experts stand 17 to 10 on the question. Most of the minority are largely influenced by the fact that they want their hives easily ready to haul by wagon. And presumably most of the majority would vote on the other side if they expected to haul their hives about. So practically the agreement all around is more complete than usual. Page 213.

BEE-KEEPING AND FISHING.

"Did you ever go a-fishing?" (Repartee as excuse for being a bee-keeper when it is presumed that some other vocation would bring in more money.) So walk up and down among thy bees that every day will be a go-a-fishing day—

So shalt thou live some added years;
So shalt thou find more smiles, less tears;
So slip some slaver's galling gears,
Yum, yum!
Why wish a little more of glittering tin
With modern wage conditions all thrown in?

BEE-KEEPERS AND HIVE-KEEPERS.

And so our genial Dr. Peiro was one of those who got pinched in this last long and cruel winter. Despite his whilom assertion that he wasn't built for a missionary, we'll use him for just that. All ye'uns who were bee-keepers last fall and hive-keepers this spring, do as the good missionary tells you on page 237.

EXTRACTING FROM EXCLUDERLESS HIVES.

On page 231, C. Davenport makes a good fight against the pestilent habit of extracting (June and July extracting, that is) from hives with no excluders. Good point where he calls attention to the fact that the queen once up in the third story doesn't go down worth a cent, and that the bottom story is in part deprived of its usefulness on that account.

ROCKEFELLER AND THE GLUCOSE BUSINESS.

I wonder if it's true that Rockefeller has gone into the glucose business, or whether the scribe of the Philadelphia Public Ledger has been "seeing things." I reckon it makes very little difference to us. The financial strength of the questionable industry has long been very great. Page 243.

WINTER LOSSES—EAGER BEGINNERS.

Fourteen colonies of bees last fall, and now down to two—March and April still to reckon with;—a job lot of appropos-to-nothing hives last fall—condemned during the winter and some regular ones built. So hops, skips and jumps the eager beginner—shedding sage advice all the while quite contrary to his doings. (Few bees, and learn the business well first.) Old story—and it's tolerably safe to presume that he will nevertheless be one of the heavy bee-keepers of five years hence. Page 254.

PAPER PACKAGES FOR GRANULATED HONEY.

The paper package for granulated honey will have to be tried by a great many persons in a great many localities before we know just what to expect of it. The number of different ways which candied honey can contrive to behave is very large. Only two days ago I had use for a 60-pound lot. It had been dry and firm for several months, and I supposed it so still. It proved to be somewhat mushy, quite too much so for a paper casing. Page 259.

THE WATER CAPACITY OF HONEY.

Allen Latham's experiment is "worth its keep" because some folks can not feel comfortable to accept the off-hand conclusions of practical men. Mr. L. gives them the thing with a scientific flavor to it. So 5 grams of honey became 7 grams in 19 days of exposure to artificially moistened atmosphere; and then it came back to its proper weight again in somewhat less than 9 days of exposure to an artificially dried atmosphere. At off-hand judgment we incline to say that honey is more ready to draw moisture than it is to dry out. The experiment rather seems to show the contrary—will keep on slowly concentrating if we give it half a chance. To take honey which already has some water and introduce an additional two-fifths of water is a pretty high degree of dilution. Of course, what's true of grams is also true of pounds; so a 5-pound pail of honey put through the same process would become a 7-pound pail of honey, 2 pounds of weight coming from the air. Page 261.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Requeening a Strong Colony.

If I kill the queen in a strong colony of bees they will, of course, start queen-cells. After a few days, when I want to introduce a new queen, will it be necessary to go over all the frames and destroy the cells? Or, if I did not, would they swarm? I would think a young queen wouldn't, but I think an old one would. If one could save handling 8 or 10 frames it is quite an item in a busy time.

Wisconsin.

Answer.—If the cells are left, the bees might and might not swarm; but to be on the safe side the cells should be destroyed. Besides, a strange queen is more likely to have a kindly reception if the bees have nothing in the hive upon which they can rest any hopes of a future queen of their own rearing.

Keeping and Using Moldy Combs.

1. I had 11 colonies of bees last fall, and have lost all but 2; all had honey, but the combs were some moldy, and are more so now. What can I do with them to keep them from molding more? Is there any danger of moths getting into them? If so, how can I prevent them?

2. Would it be all right when a swarm issues to hive them on those combs? Would they be likely to stay all right, or would they be disgusted and swarm out?

Maine.

Answers.—1. The best thing is to give them into the care of the bees, but with 9 dead out of 11, it is hardly practicable to give them all to the bees at once. In the meantime it will check the progress of the mold if you put the combs in a dry place. That will likely mean at the same time a warm place, and warmth will favor the development of worms. Look over the combs occasionally, and pick out with a wire nail any worms you can trace. Put a hive full of combs under a colony, allowing the bees to pass through this lower story. After a few days another story can be put under, and a little later one or two on top.

2. Unless absolutely filthy, a swarm will accept readily a hive of old combs.

Thin Foundation in Hoffman Frames—Split Sections—Moldy Combs.

1. How deep can thin foundation in brood-frames be used and not break down by the bees?

2. How are sections cut or split to use full sheets of foundation?

3. How is the best way to clean or sweeten up brood-combs that bees have died on that are moldy? NEW YORK.

ANSWERS.—1. Merely fastened in the top-bar by the usual wedge, without wiring or splints, you would probably find thin foundation would sag if starters were more than an inch deep, and I wouldn't feel too sure of an inch.

2. They are made in two parts by the manufacturers. At least that's the way in England; I'm not sure whether they're made in this country.

3. The very best way is to give them in care of the bees. Of course the dead bees should be swept off before that, and if not convenient to give them at once to the bees, remember that a cool place will keep back the worms and a dry place will keep back the mold. See answer to "Maine."

Transferring After Swarming.

I take the American Bee Journal, and in every issue I see the question asked: When is the best time, and what the best way, to transfer bees from box-hives to movable-frames hives? You say wait until they swarm, transfer 21 days afterward. I am a beginner, and shoud like to know something about this work, as I have 3 box-hives from which I wish to transfer the bees this spring.

May I ask if you mean then in 21 days after they swarm you drive the balance in with the swarm? You say there will be little or no brood at this time. Is there not a queen that is in there laying at this time? Besides, I have seen bees swarm 10 days after the first prime swarm. I should like to understand about it. MARYLAND.

ANSWER.—If a second swarm should issue in 8 or 10 days, that will not interfere with the transferring 21 days after the issuing of the prime swarm. But you are not likely to have second swarms if you put the prime swarm on the old stand, set the mother colony close beside it, and a week later move the mother colony to a new place. In 21 days after swarming there is likely to be a young queen in the mother colony, probably having commenced to lay, possibly not; if you unite the drive with the old colony, the bees can settle the matter of queens. Or at the end of 21 days you can transfer to a new hive all that is in the old hive, leaving it as a separate colony.

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Out in the Fields.

The little cares that fretted me,
  I lost them yesterday
Among the fields above the sea,
  Among the winds at play,
Among the lowing of the herds,
  The rustling of the trees;
Among the singing of the birds,
  The humming of the bees.

The foolish fears of what might pass
  I cast them all away
Among the clover-scented grass,
  Among the new-mown hay,
Among the hushing of the corn,
  Where drowsy poppies nod,
Where ill thoughts die and good are born,
  Out in the fields with God.

—Selected.

Beedom Boiled Down

Shall Bee-Keepers Buy or Make Their Supplies?

There are those who think that a bee-keeper can make his supplies cheaper than he can buy them. The fact that a very large proportion of bee-keepers buy in preference to making is proof that they think buying is better. The question *why* manufacturers can make supplies more cheaply than the bee-keeper may be answered briefly by saying that where any article is manufactured on a large scale there is generally opportunity for saving; but some who are interested in the question may be glad of the fuller particulars given by the Editor of Gleanings in Bee-Culture, who, being connected with one of the largest bee-supply manufactories, may be supposed to speak by the card, at least from the manufacturer's side. He says:

> The large manufacturer of bee-hives can, as a rule, supply hives ready to put together in lots of 100 at a price equal, or nearly so, to what the bee-keeper would have to pay for the same grade of lumber at the average planing-mill without any work put on it. This seems like a broad statement, but let us see how it works out in fact. Good, clear, first-class lumber, such as the manufacturers are now putting out in their hives, with few or no knots in, will cost at the planing-mill between

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$50 and $60 per 1000 feet; but we will say it is 5 cents a foot. A standard 8-frame dovetailed hive has 20 feet of lumber in it, including waste necessary. This makes the lumber in that hive cost $1.00 At 6 cents a foot it will cost $1.20. Let us now look at a 1904 catalog. We find that the price of an 8-frame hive in lots of 100 is $1.25 (for it would be folly for any one to make less than a hundred hives). If a bee-keeper goes to a planing-mill he will pay, then, almost as much for his lumber, or perhaps just as much, as the regular supply-manufacturer would charge for the hives all cut ready to put together *without any waste.* But labor has advanced, and the mill-man will not charge less than 40 cents an hour, and possibly 60. He is not familiar with hive-making. His saws are coarse-toothed, and his men do not realize the importance of extreme accuracy in hive-making. The hives at the ends will not be lock-cornered, for the mill has no machinery for that purpose. The boards, when put together, will have to depend entirely upon the nails for the strength of the corner.

Perhaps it might be said that the bee-keeper will have to pay freight on his factory hives, but they will be accurately cut and standard in every respect. I have seen a lot of planing-mill hives, and heard some of the bee-keepers who had hives made in that way, tell their experiences. The stuff was irregular, the frames would not alternate, they were very rough, and the work was altogether unsatisfactory.

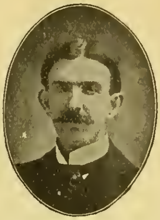
But perhaps some one does not see how a manufacturer can furnish a bee-keeper a complete hive at the bare cost of the lumber in the open market. The supply-manufacturer can buy by the cargo and a comparatively cheap grade of lumber, and cut around the knots. Here is a board that is 12 or 16 feet long. We will say it has four or five knots in it. Out of this board he may be able to cut out of the clear stock two or three ends or two or three sides. There will be several boards that have knots in them. The manufacturer, who is in the business, can use these for a great variety of purposes, and not lose money on them. Some of them will go into the ends of square (can) boxes; others will be used for crating; some will be used for a great variety of purposes too numerous to mention. The bee-keeper who desires to have his hives made in a small way would have to buy clear stock at a price of $50 or $60 per 1000, for the planing-mill could not afford to throw away short boards having knots in them, for it would have no use for short, knotty boards. Its business is making sash, doors, blinds, door-cases, window-frames, etc., and it can use *only long stuff.* It will, therefore, be necessary for the bee-keeper to buy clear stock, which is expensive, as he can not afford to have hives with loose knots in that are liable to fall out. He may argue that he can use a cheap grade of lumber; but experience with thousands of customers shows that the average customer won't have such lumber in hives at *any price.*

It is true there has been a sharp advance in prices on bee-supplies; but the marked advance in lumber, in labor, and in all common commodities, has made this all necessary. Prices on bee-goods have hardly kept pace with other commodities.

Selling Extracted Honey by Samples.

G. A. Deadman gives the following interesting particulars in the Canadian Bee Journal:

If you prefer giving the sample in a bottle rather than in a little dish, a wide-mouthed dish, a wide-mouthed bottle, such as vasoline or similar preparations are put in, is the better; it would, I presume, hold nearly three ounces, which would be little enough in a bottle, less than this does in a dish. I have found a 10-pound pail serve for 112 dishes, or about $1\frac{1}{2}$ ounces for each. As to the cost, if only used once the latter would be the more expensive of the two, but when used over and over again they cost much less. The bottles, corks and labels, apart from the honey, would cost 30 cents a dozen, and require double the quantity of honey; of course smaller bottles could be used, but there is something in



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Complete stock for 1904 now on hand. Freight-rates from Cincinnati are the lowest. Prompt service is what I practice. Satisfaction guaranteed. Langstroth Portico Hives and Standard Honey-Jars at lowest prices.
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looks, and in this respect the dishes have decidedly the preference. Possibly the bottle may be a more lasting advertisement, but only so long as the label remains on it. It is more troublesome to prepare, but less to deliver. Either may appear to some to be too troublesome and expensive, but there are two things we should remember in connection: one is, that you require to sample a place only once; this will create a demand for your honey that will not cease with your first order. You need not be over-anxious, therefore, to sell all the first time. The other encouragement is that once a trade is established the expense of selling and delivering is much less, and apart from this the advanced price of retail over wholesale should cover the cost incurred. When delivering the sample an order card such as the following is handed in, and also the circular reprinted below:

MR. G. A. DEADMAN

PLEASE DELIVER ME

.........10-lb. pails pure honey, costing......
and oblige, Yours truly,

Name........................ ....

Street and No..................

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ABOUT OUR HONEY.

Please try this sample of our honey, and if you would like more, then state on the order card the quantity you wish, and either myself or my representative will call to-morrow and get your order, together with the little dish. A 10-pound pail costs $...... Honey at this price not only compares favorably with preserved fruit, but as a rule is preferred to it by many, especially children. The system requires a certain amount of sweets, and there is none that is healthier or better than *pure honey* that has been well ripened. By being well ripened, we mean honey that has been left on the hives until it is rich and thick. When honey is first gathered by the bees it is then known as nectar, and contains a large percentage of water. If extracted or taken from the hives too soon it will be thin and watery, lacking in flavor and keeping qualities. This accounts for the great differences in honey when gathered from the same flowers. We, of course, do not get as much honey when left on the hives in this way, but the quality is much improved. Apart from this, honey differs according to the flowers it has been gathered from. In this country white clover and basswood are considered the best.

Almost all pure honey will granulate or become hard in cool weather, or soon after it is taken from the hives; all that is required to make it as liquid as the sample given you is to stand the vessel containing it in hot water over a slow fire, according to directions on the label.

As our supply of honey may be exhausted soon, I would recommend ordering your winter supply. You need not have any fear of our honey spoiling; all that is necessary is to keep it in a warm, or at least a dry, place. Never put honey in a cellar unless it is in sealed containers, as it absorbs moisture. Many families accustomed to honey have it on the table every day, using from two to three hundred pounds every year, and some as much as five hundred pounds. We use upwards of three hundred pounds a year in our family of seven. Order liberally, as it can be returned either to myself or your grocer, if not perfectly satisfactory. I am,

Yours truly,

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	Price before July 1st. 1	6	12	After July 1st. 1	6	12
Untested	$ .75	$4.00	$7.50	$ .60	$3.25	$ 6.00
Select	1.00	5.00	9.00	.75	4.25	8.00
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Select Tested	2.00	10.00	18.00	1.50	8.00	15.00
Select Breeders						$3.00 each

Send for Circular.
JOHN M. DAVIS, Spring Hill, Tenn.

—NOTICE.—

I have booked all the orders I can fill for Untested Queens until June 1. JOHN M. DAVIS.
Spring Hill, Tenn., May 6.
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Send for our FREE CATALOG. It will tell you how to put foundation in four sections at once; and the only way to get a full section of honey
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Catalog price on
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100 colonies of Italian and Carniolan BEES for sale; all in 8 and 9 frame hives—all nearly new—and bees all in good condition.
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—and are ready to do business. Write us for leaflet showing our special Hives and prices. It is the greatest bargain you ever saw.
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FROM MANY FIELDS

Small Loss in Wintering.

My bees wintered well. I lost 4 colonies out of 57. I left them on the summer stands. I am overhauling them and they have lots of honey. I will get 1000 or 1200 pounds. I have a mixed lot of bees. They did well last season. I am a new hand, this being my second season.

I keep "bach," and take the American Bee Journal, and it is a help to me. I like to read it. JAMES H. BAKER.

Marion Co., Mo., May 9.

Winter-Cases as Hive-Covers.

Mr. E. E. Hasty, on page 311, refers to my article describing my winter-cases, and in regard to the statement I made there, that I use the cases during the summer, after taking the packing out, to protect the hives from the excessive heat, and make them serve the purpose, too, of a hive-cover, says: "Nice to obviate the need of a hive-cover—providing, that is, that the tar-paper continues impervious all summer."

I want to say to Mr. Hasty that my winter-cases have done service for four years, and are all still "impervious." The tar-paper to re-cover them will cost not to exceed 6 cents each. I spoke of my winter-cases particularly to call attention to the cheap way in which they are made, and their serving double purpose. A. J. KILGORE.

Wood Co., Ohio, May 5.

Wintered in a Cold Cellar.

I am a reader of the American Bee Journal, and have been since I commenced in the bee-business, in the spring of 1903. I got 2 good, strong colonies of Italian bees from Wisconsin. They did very well last summer. Nov. 1 I put 7 colonies into the cellar; they were well supplied with honey. The temperature in the cellar, up to Jan. 20, 1904, was 35 degrees above zero, then it dropped to 28 and 30, and so remained until the first of March. April 2 I put them on the summer stands, all in fine condition. After being in five months I swept up about ½ gallon of dead bees. They used but little honey during the winter, and on April 15 were gathering pollen. They will be in good shape when the honey-flow comes.

I mention this from the fact that I never heard of bees being wintered in as cold a cellar. The Bee Journal recommends 45 to 50 degrees. J. M. ADAMS.

Davison Co., S. D. May 10.

Wintering—Making Hives.

I put 39 colonies of bees into the cellar Nov. 30, and took out 38 live ones on April 4, and all are in fair condition at this date, although there have been but four days warm enough to give them a good flight since taking them out of the cellar. I wintered 16 colonies out-of-doors, placed them close together in a row, facing south, and packed with straw on the north side, top and ends. Only 7 colonies came through alive, but that is not strange, as they are the weakest of the lot; besides, there were 36 days between December 8 and March 3 when the mercury ranged from zero to 32 degrees below—6 days in December, 12 in January, 17 in February and one in March. What the harvest will be for honey and other crops the future will tell; the season is nearly two weeks late. The frost is not nearly out of the ground, and very little seeding has been done.

I was very much interested in Mr. Edwin Bevins' article on "Making Frames, Hives and Supers," on page 277. As I have never been successful in "getting something for nothing," I am quite anxious for him to "point out the source of material for hives and some other things that will cost no money, or next to none."

The subject of making our own hives, etc., being quite prominent just now, I will give a little of my own experience, or, more properly expressed, perhaps, my own little experience, as this has been my first attempt in this line; but I should never have undertaken the work if I had not had plenty of tools for amateur work, such as plow, rabbet-plane, jointer, jack and smoothing planes, saws, squares, etc., all of which have a place in making bee-hives. Before buying the lumber, I did considerable figuring to get proper lengths and widths for the different parts of the hive, so that the waste has not been worth mentioning. The "fillings," such as frames, wedging boards and bottom-slats for supers, honey-boards, etc., I ordered from the factory.

The catalog price of 25 1½ story, 8-frame hives, in the flat, is $36.25 at the factory. Without taking up space to itemize, I find that the cost to me of 26 hives with the cover and bottoms, and 27 supers—including "fillings" bought of the manufacturers—is just $19.68. The item of labor I have left out for the reason that my time was not worth anything for anything else. I am 69 years old, and feel better physically and mentally, too, in that kind of employment than sitting around the house doing nothing but read the papers or bother the women-folks. But I am sure it would require a greater genius than I am to make good bee-hives with only a "saw and jack-knife" for tools.

While I have no quarrel with the manufacturers of bee-supplies, and think I owe to them quite a degree what measure of success I have had with bees, still, I like to be in a position where I can stand on my own "Footeing" when it seems for my interest to do so.

Mr. Bevins complains of being tired of the effort to make the one-piece section retain its "squareness." I had the same trouble for years, until three years ago I made a machine for folding sections entirely different from anything I ever saw or heard of before, and since then I have no such trouble; with this machine I can put together 10 sections a minute, and they are perfectly square. I fold enough at one time to fill 5 or 6 supers, then put them in place and they *have* to retain their "squareness." A. F. Foote.

Mitchell Co., Iowa, April 19.

[Why not describe that section-folding machine? And also send in a picture of it. We should be pleased to publish them for the benefit of the fraternity, if Mr. Foote will do so.—Editor.]

Long Winter—Bees Starved.

This is said to be the banner county in this State for the production of honey, but last summer was very hard on bees here, as there was no honey-flow after the bees quit rearing brood, consequently they went into winter quarters quite light in stores, and, being a very long, hard winter, about one-half of the bees in this part of the country have starved to death. E. L. Cook.

Benton Co., Minn., May 11.

Clipping Queens—Bee-Houses.

I returned to my northern home from the South on April 7, and I find a big change in the climate. I have experienced lots more cold since arriving here than I did all last winter. On my arrival here I found I had lost one colony; the prolonged winter gave them dysentery. They were all packed in chaff hives. The rest are doing finely.

I notice that quite a number ask about a device to catch and clip the queen. I made a simple little device that is the best thing for that purpose I have ever seen. It is set over the queen as she travels over the brood-comb, and she can be taken in the house to clip if it is more convenient. She is not touched with the fingers. The cost is 10 cents. Any one, if he has the wire, can make one in a few minutes. Often her wings will slip through the spaces so they can be clipped so easily. I always release her on the same frame that I find her on.

When I find the frame with her on, I watch my chance and set it over her, and as quick as she runs up, slip my thumb over the end, set the frame on end, where I took it from, clip

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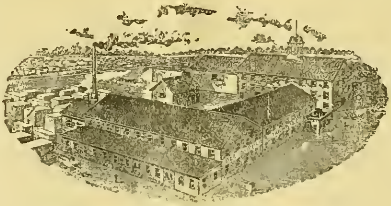

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the queen, then lift out the frame carefully, and if the bees are not quiet I wait a few seconds, then find a clear spot about the middle of the frame and let her walk out. I watch her a little and see that she is received all right, then put the frame in place. Should the bees undertake to ball her, I have dropped the ball in water, and they will leave her quickly. I then daub a little honey on her and let her go. But I have never had but two queens balled in all that I have ever clipped.

When I left the South I had 56 colonies; all have their queens clipped. Now, if they swarm I will probably lose the queen, but the swarm will return to its hive.

I am in favor of a good bee-house. I have all of my bees in one, excepting 14 colonies. It is far more pleasant for them than those outside. There is no danger of robbing, and I can work rain or shine.

I see that a good many build their bee-sheds wrong, according to my notion. If I was building a shed with the roof running one way, say facing the south, have that the lowest, have the eaves on the south. You want it the highest in the rear. No one should stand in front of a hive to manipulate the frames. My bee-house in the South is ant-proof. The sills are set in cement piers made of brick. This space is three inches wide all around. Ants in the South are quite bad. The only one that does much harm is the big, black ant. Roaches do no damage, I think, but I generally kill them when I find them around the hives.

I rather think the honey crop will not be large, as there are too many dead colonies, and some will not take care of what is left as they should.

I rather admire the way L. V. Ricketts goes for those bee-men that think they own the earth. I rather think "hog" would fit them.

R. L. McColley.

Wood Co., Ohio, May 6.

Hard Winter—Fine Spring.

The past was a hard winter on bees in this locality—about 60 percent lost. It is a fine spring so far, however, for the bees that are left.

H. D. Tallady.

Emmet Co., Mich., May 13.

Bees Wintered in Cellars.

Bees are nearly all wintered in cellars here, nevertheless the result of the past winter shows a loss of from 25 to 40 percent. Our spring has been slow, with a "promise to stay," but with the exception of a slight chill at present, the past two weeks have been exceedingly fine, and the bees have gathered freely from willow and soft maple.

Todd Co., Minn., May 11. E. S. Roe.

Cellar-Wintering of Bees.

Well, the winter weather ceased all of a sudden a week ago last Friday, April 22. The temperature had been holding close around 20 to 35 degrees above zero for some time, with some snow and much high wind. Since April 22 the mercury has averaged about 70 degrees, and as high as 78 degrees, and scarcely wind enough to tell from what direction it came. Box-elder, elm, soft maple, red cedar, willows, ash, and a few other trees, are in full bloom, and it seems like a dream that the bees have been confined in the cellar, wrapped in winter garb, for 157 days, when you see them tumbling one another gathering honey, and keeping it up for a week. The result of my wintering is as follows:

"Wagner Yard," 20 colonies packed in straw Nov. 5; unpacked April 25—12 colonies dead (1 queenless, the rest starved with honey still in the hives), 8 colonies living, with laying queens and but a quart-cup size of a cluster. Enough of such weather as last week has been will put them in shape for the July white clover.

The home yard, of 111 colonies, wintered in the house-cellar, 18 colonies dead, of which about ⅛ were queenless, drone-layers, or laying workers. The other ⅞ were mostly starved colonies, caused, I think, in part, by too many colonies for the size of the cellar (14x16 feet), with cement floor, bricked sides, lathed and plastered overhead and over the brick sides. One window 12x30 inches, opening to the north out under the kitchen, with stone foundation, and another of like dimensions open to the outside in the west with a blanket hanging over it. A 3x6 foot door at the north opening up into another room, all open all the time. The temperature was 52 degrees most of the time, never below 48 degrees or above 55 degrees.

The dead bees were swept up from the cellar floor and weighed as follows:

Put into the cellar Nov. 18. Dec. 18 weighed 4 pounds; Dec. 24, 3 pounds; Jan. 22, 18 pounds; Feb. 12, 7¼ pounds; Feb. 25, 30 pounds; March 18, 26 pounds; March 28, 5 pounds; April 7, 6 pounds; April 23, 60 pounds. Total 159 pounds. (157 days).

Owing to the crowded condition of the cellar, it was hard to get at all the sweeping space, and at times the job was done more thoroughly than at others, hence the great differences in amounts secured. The last clean-up of 60 pounds was partly due to reaching corners not accessible, and the great fatality during the last week's confinement. One colony was dead Dec. 1, 2 on Jan. 1, and all the rest were alive and apparently strong, excepting 8 or 10 colonies, up to April 15 or 29. Several colonies that were yet *only* alive on taking them from the cellar, were destitute of stores, and revived (and are doing well) after being fed.

I concluded that cellar-wintering is the best for this latitude, and not much less than 20 cubic feet of cellar-space, with some better ventilating system than merely doors and windows. Also, that from 50 to 55 degrees is too warm, and that the bees consume more honey at the high temperature than at a slightly too low a temperature. Also, that a 10-frame hive should weigh not much less than 60 pounds with the bees and 9 frames of honey.

Sioux Co., Iowa, May 1. F. W. Hall.

Cellar-Wintering of Bees.

I placed 62 colonies of bees in the cellar the last week of November, and took them out April 4 and 5—60 colonies alive and 2 dead. The temperature of the cellar was 34 degrees, with no ventilation. The cellar was also very dry.

About 90 percent of the bees that were wintered out-of-doors are dead; true, many of the colonies are weak.

My 20 acres of alsike clover is completely winter-killed, also a strong 50 percent of all white clover. Will Dr. Miller please tell us where, or from what source, our big crop of honey is going to come? J. W. Johnson.

Stephenson Co., Ill., May 5.

Wintering Bees—Home-Made Hives.

My bees came through the winter with some loss, but better than I expected, considering the long confinement—from Nov. 15, 1903,—and their not having a flight until March 10, 1904. I have honey galore from those colonies that died. The honey froze so hard and the cold was so intense, and held on so long, they could not move, and they starved with all this rich store of honey in sight, and the mercury playing around zero for 3 months. I had my bees on the summer stands, with outside case, with chaff cushion on and well protected, and still the loss was great.

Now, how am I to prepare for next winter? That is the question that confronts me, as I have no cellar under my house. The winter problem of bees has knocked the wind out of me. Now, fellow bee-keepers, what shall we do to prevent this great loss of bees again?

I have before me a statement in the American Bee Journal of April 14, 1904, which looks reasonable, as I know by experience. I am a mechanic and I have made lots of hives at a cost of $1.00 per hive. I have made and sold them, and beat the manufacturer in prices and durability. Why is this? I have before me some half-dozen catalogs and they tally to a cent in prices. A bee-keeper need not look through glasses to know that it means a combine or trust. I for one shall make my own hives and will produce chunk honey and render it out, before I will pay such prices for the sections and supplies. I will take Mr. Hutchinson's advice: Make your

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on poultry amounts to many times the cost of Lambert's Death to Lice—the sure preventive. All loss can be saved and more profit made by the use of this famous powder. It frees setting hens from these pests without harming eggs or chicks. A trial box 10c will prove it. 100 oz., by express, $1.00.
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Choice home-bred and Select Imported Stock. All Queens reared in full colonies.
One Untested Queen.....$1.10
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Tested Select Breeders and Nuclei ready now; Untested in May. Safe arrival guaranteed.
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3 L. frames sealed brood, well covered with bees, and a good Queen, $2.50.
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The Monette Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. It is used by many bee-keepers. Full printed directions sent with each one. We mail it for 25 cents; or will send it FREE as a premium for sending us One New subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,
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- CHICAGO, ILL.

own hives. They will not get rich if all bee-keepers will do the same.

We are having a late spring. The bees cannot fly, as it is too cold and wet.

I have taken the American Bee Journal a great many years, and I expect to continue unless the editor turns me down for this article.
F. McBride.
Hardin Co., Ohio, April 18.

[We are not in the habit of "turning down" contributors. But whenever we deem it best to do so, it's "as easy as rolling off a log."—Editor.]

Experience in Wintering.

In the spring of 1903 I bought 2 colonies of hybrids the last of May. In July I bought 2 colonies of Italians and transferred them into Dadant hives; these increased two, so I had 6 colonies in the fall. The best colony was stolen, one became queenless and died, leaving me 4 to put on the shelf for winter. I bought 3-ply tarred-paper and built a house around the stand, open to the south, and had a cloth curtain that I could drop down in front during very stormy weather to keep out the snow or rain. I used the "Hill's device" on all the hives, and used heavy cotton canvas to cover the brood-chamber, no chaff cushions or trays, and I lost only one colony through the winter. They seem to have plenty of honey in the hive, but they could not move about, it being so cold. They evidently starved with plenty of stores, but could not get to them.

I attribute my success the past winter to the "Hill's device" more than all the other precautions taken to make my bees comfortable.

May 3 I was strolling about in the garden when I saw a bunch of bees hanging upon a limb of a spruce tree—about a quart—and I put them in a hive and gave them 2 brood-frames of comb and honey. They are carrying in pollen and doing good work for so few. I haven't the slightest idea which colony this swarm came from. I think I can go on record as having the earliest swarm, at least in this locality. The winter losses have been very heavy here. It would be safe to say that 90 percent of bees are dead. My bees were all in single-wall hives, and the strongest colony this spring was in a box made of half-inch basswood lumber.
C. E. White.
Crawford Co., Pa,. May 10.

Italian Bees for Sale

15 strong colonies in 8-frame Langstroth hives, and 12 colonies on 12-frames crosswise of the 10-frame L. hive, frames 13½ in. long, and 9⅛ deep. Price, per colony, if taken at the bee-yard, $4.25; if to be shipped, $5 f.o.b. here.
Address, A. WICHERTS,
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Take Notice That the New Century Queen-Rearing Co. will have 1000 Queens ready for the mail by April 20. Tested, $1.00; Untested, 75c; 5 for $3.25; 10 for $6.00. Prices on larger quantities and Nuclei given on application. "Prompt service; fair treatment" is our motto.
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50 1½-story Dovetailed Hives and 25 1½-story Langstroth Simplicity Hives, just from factory, at catalog prices, but freight paid to your railroad station. For particulars, address.
21A2t C. J. THIES, Pepin, Pepin Co., Wis.

CONVENTION NOTICE.

Texas.—The Texas State Bee-Keepers' Association will meet at College Station, Tex., Tuesday, Wednesday and Thursday, July 5, 6 and 7, 1904, beginning at 10 a.m. on Tuesday. This will be during the meeting of the Texas Farmers' Congress, so it will be a great time. Railroad rates and board will be cheap.

The convention will open at the time named. Come early and take part.
Louis H. Scholl, Sec.
College Station, Tex.

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[This Cut is the Full Size of the Knife.]

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The holsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last-time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your Pocket-Knife will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us Three New Subscribers to the Bee Journal (with $3.00.) We will club the Novelty Knife and the Bee Journal for one year, both for $2.00.

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☞Please allow about two weeks for your knife order to be filled.

Ammonia for Stings and Removing Propolis.

The best thing I have used for stings is ammonia. This is also the best thing I can find to remove propolis from hands. I perspire some in the palms of my hands, then rub without soap or water for about a minute, then use warm water and soap. It comes off quickly. I use it to clean tools, sometimes.
Louis A. Cerney.
Yates Co., N. Y., May 9.

Wintered Well—Doing Fairly Well.

My bees are building up in good shape for the white clover honey harvest, but it has been an awful winter for them, and my losses have been greater for the last winter than for a long time. But I think I did well, when I consider the losses some have had. I put 34 colonies into winter quarters, last fall, and lost 8 colonies. I winter my bees on the summer stands, in sheds, putting burlap over the brood-frames, and an empty super filled with planer shavings, closing the entrance, excepting about 3 inches. I believe if all bee-keepers would keep their bees in a dry place, and leave a little ventilation above the brood-frames, in this manner, by putting gunny-sack, or 2 thicknesses of burlap between super and hive-body, over brood-frames, which will leave enough ventilation to let a large amount of moisture escape, and keep the bees dry, there would be less winter losses. I do not think it is the cold weather that kills bees, but the excess of moisture.

My bees have commenced to gather honey from fruit-blossoms, and are doing fairly well, and I may get a chance to use some of the 4000 sections that I bought in February.

I have been trying to get some of my bee-keeping friends to join the National and State Bee-Keepers' Associations, and have succeeded in getting three besides myself to join.
J. G. Schoon.
Champaign Co., Ill., May 5.

Results in Wintering in Ontario.

In looking over the varied reports concerning recent winter losses that have appeared in late issues of the American Bee Journal, I have been led to wonder at the different opinions expressed as to what is an *extreme* period of confinement with bees wintered outdoors. Some few weeks ago, if I mistake not, Dr. Miller asked if any one ever had bees to winter successfully outdoors, if they were confined to the hives for more than 100 days without a flight. Methinks that many here in Ontario could have informed Dr. Miller that in three years out of five our bees endure such trials as that and appear to be none the worse for the experience.

Only a few days ago I noticed a Georgia bee-keeper's complaint, in effect that bees had suffered there from the severe winter. Poor bees! Wonder what they would have done if they had been in a temperature of 25 degrees below zero for days at a time, if they "suffered" when "way down in Dixie."

For the information of others enjoying a warmer climate than we poor mortals, I will give my report of wintering, which is no better, and probably worse, than some other bee-keepers in adjoining counties.

At the Cashel apiary, 100 colonies were wintered in permanently packed hives (sawdust packing). The hives are all 9 and 12 frame, Langstroth length and Quinby depth; 94 colonies are alive at this date (April 30), the majority are in fair condition, although not by any means in as good shape as is usually the case. Three of the defunct ones starved; in fact, all 6 really starved as the other 3, while they had stores at one side of the hive, and owing to the continued cold had been unable to move when the honey "played out" where they were clustered.

November 15 the weather turned cold, and while there were a couple of weeks previous to that date that the bees could have flown, yet very few of them did. They never had even a partial flight until March 23, so, counting from Nov. 15, they were confined 131 days.

At the Altona yard 30 colonies were wintered in the cellar, and all came through alive, but a number are weak; 59 were wintered outside, some in single cases, the rest 2 in a case. All were packed in chaff. To-day 52 are alive, and most of those in good condition. At the home yard 75 were wintered outdoors, 60 in packed hives and, I am sorry to say, 15 in papered hives, *a la* A. C. Miller; 55 are alive, but a number are weak. Every one that was wintered in the papered hives—they were all strong colonies—are either dead or reduced to a few handfuls of bees. Papered hives may be all right for Mr. Miller's locality, but they are certainly "not in it" here in Ontario.

The bees in the home yard were shut in for the same period as the Cashel apiary, but the bees in the Altona yard, owing to snow not being away from the entrances of most of the hives, did not have a flight until April 5. This would be 142 days of steady, cold weather, and the funny part is that those bees are by all odds in the best condition of the three yards. I don't mean to insinuate that their extra rest brought this about, but it does go to show that it is exceedingly difficult to say how *long* bees will endure confinement without being seriously inconvenienced.

I forgot to say that the hives at the home and Altona yards, like at the Cashel apiary, are all very large, viz.: 8 to 12 frame Quinby—a circumstance that makes it all the more wonderful that the bees wintered, if we accept the theory that large hives are colder than small ones.

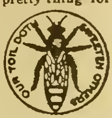
Mr. Doolittle reports 90 percent of the bees dead that were wintered outdoors in his locality. Three years ago, when we had the very cold snap in February, the mortality rate was very high in New York and other buckwheat sections. Can it be that during extreme cold weather bees do not winter as well on buckwheat as they do on clover honey or sugar syrup? Last season we had practically not a bit of honey after clover ceased yielding in July; the result was that we had to feed heavy with sugar syrup to make up the deficiency. Possibly our seeming misfortune was a blessing in disguise. While I do not like to feed oftener than I *have* to, yet I must confess that I don't think we have ever lost a colony in the winter that was fed heavily on sugar syrup the previous fall.

In looking over what I have written, I notice that I made an error. In the Cashel yard 10 colonies were there wintered in papered hives, while only 2 colonies are dead; the balance are all in poor condition, although not as bad as those thus wintered at the home apiary.

The first pollen was brought in to-day; the season is extremely late, but as vegetation has been withheld, and clover has wintered well, possibly the bees may yet with favorable weather build up for the honey-flow.

Ontario, Canada, April 30. J. L. BYER.

A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.



The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10c; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

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Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Beeswax Wanted for Cash.
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2. Sending your own name with the $1.00 for the Bee Journal will not entitle **you** to a Queen as a premium. The sender must be already a paid-in-advance subscriber as above, and the new subscriber must be a **NEW** subscriber; which means, further, that the new subscriber has never had the Bee Journal regularly, or at least not for a whole year previous to his name being sent in as a new one; and, also, the new subscriber must not be a member of the same family where the Bee Journal is already being taken.

We think we have made the foregoing sufficiently plain so that no error need be made. Our Premium Queens are too valuable to throw away—they must be **earned** in a legitimate way. They are worth working for.

We will book the orders as they come in and the Queens will be mailed in May or June. Will you have one or more?

If you cannot get a new subscriber, and want one of these Queens, we will send the American Bee Journal a year and the Queen—both for only $1.50. Address,

GEORGE W. YORK & CO., **CHICAGO, ILL.**

Flood Water

March 26th to 31st we had from two to four feet of water in our warehouses. As a result we will sell

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HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, May 9.—The market has an over-supply of comb honey, very little of which will pass as No. 1 grade—price is 11@12c per pound, and off grades at a corresponding value. Extracted, 6@7c per pound for best grades of white; amber colors, 5@6c per pound Beeswax, 30@32c. R. A. BURNETT & CO.

CINCINNATI, O., May 19.—The honey market continues to be dull; if anything, the prices on comb honey are lower; concessions are made on bigger lots. Fancy white comb honey, from 12½@14 cents. Sales on extracted are made at the following prices: Amber, in barrels, 5¼@5¾c; in cans, ½c more; alfalfa, water-white, 6@6½c; strictly white clover, for extra fancy, 7½@8c. Beeswax, 30c.
C. H. W. WEBER.

PHILADELPHIA, May 9.—There has been very little demand for comb honey the last two weeks, and prices are about the same. The commission men are not refusing any reasonable offer. We quote: Fancy, 12@13c; No. 1, 10@11c; buckwheat, 8@9c. Fancy extracted honey, 7½c; amber, 6½c. Beeswax, 31c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

ALBANY, N. Y., April 25.—Honey market is very dull. Stocks of both comb and extracted are lighter than we thought would be a month ago, when we thought we would have to carry over the season. The demand for honey here will be light until the new crop comes. Quotations are nominally—8@13c for comb, and 5@6c for extracted. H. R. WRIGHT.

CINCINNATI, April 18.—The honey market here is reassuming activity, and judging from present indications, and the lateness of the season, the last season's crop will be consumed before the arrival of the new. Amber extracted in barrels and cans, 5½@6½c; white clover, 6½@8 cents, according to quality and package. Fancy comb honey sells at 12@15c. Beeswax, 30 cents. THE FRED W. MUTH CO.

BOSTON, May 14.—The demand for honey is extremely light, almost nothing, and supplies are heavy for this time of the year, and our prices therefore are largely nominal. We quote fancy white at 15@16c; A No. 1, 14@15c; and No. 1, 14c, with no call for under grades. Extracted, from 6@7c. BLAKE, SCOTT & LEE.

KANSAS CITY, April 18.—The demand for honey is a little better than it has been. Prices on strictly fancy comb are $2.50 per case, if not candied; the great trouble with the majority of honey coming from the West at present is that it is more or less candied, and about $2.00 to $2.25 is all we can get for it; amber is selling at $2.25 per case. Extracted is dull at 5@6c. Beeswax in good demand at 30c.
C. C. CLEMONS & CO.

NEW YORK, May 21.—The market on comb honey is decidedly dull and it is almost impossible to move large blocks. What little trade there is, is done in a small way. We quote nominally: Fancy white at 13c; No. 1 at 12c, and amber at 10c; no demand for dark at all. Extracted is in fair demand at unchanged prices, with a good supply. Beeswax remains firm at 30c, but we expect a decline very shortly.
HILDRETH & SEGELKEN.

SAN FRANCISCO, April 27.—White comb, 1-lb. sections, 11½@12c; amber, 8@10c. Extracted, white, 5¼@5¾c; light amber, 4¼@4½c; amber, 3¾@4¼c; dark amber, 3¼@3¾c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

A shipment of 300 cases extracted went forward the past week per steamer for Germany. Local trade is of light proportions. Quotable values remain as previously noted, but market is not firm at these figures.

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WANTED! FANCY COMB HONEY
In no-drip shipping-cases. Also Amber Extracted in barrels or cans. Quote your best price delivered Cincinnati. The Fred W. Muth Co.
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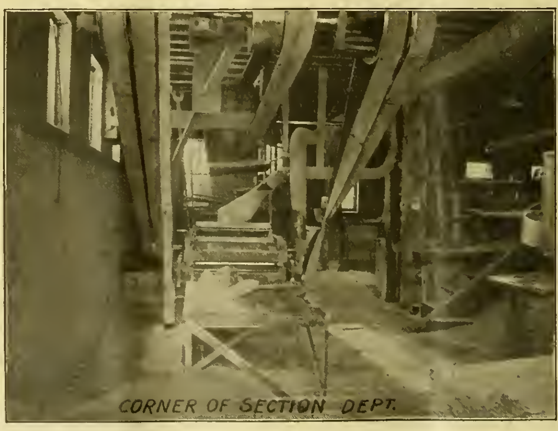

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If not, why not?

G. B. LEWIS COMPANY,
WATERTOWN, WIS., U.S.A.

AMERICAN
BEE JOURNAL

44th Year. CHICAGO, ILL., JUNE 2, 1904. No. 22.

APIARY OF J. S. HAAG, OF SIOUX CO., IOWA.

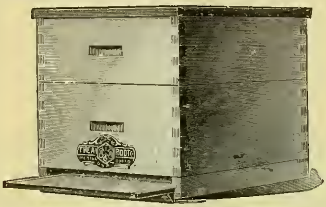
APIARY OF CHAS. W. SAGER, OF BENTON CO., MINN.

(See page 388.)

APIARY AND HOME OF MR. W. J. FREE, OF ONTARIO, CANADA.

THE VOICE OF THE PEOPLE

DANZENBAKER'S HIVE.



MORE HONEY. BETTER PRICES.

WE HAVE TOLD YOU SOME THINGS

—ABOUT THE—

DANZENBAKER HIVE

FOR COMB HONEY.

NOW SEE WHAT OTHERS SAY.

MORE HONEY.

UNION BRIDGE, MD. Feb. 9, 1904.

The A. I. Root Co., Medina, O.

Gentlemen:—I saw in a recent issue of your paper that you have a department called "Reports Encouraging." I shall send you my report.

I use the Danzenbaker hive and will give you report of the same, as the few dovetailed hives that I use do not compare at all with the Danzenbaker. One colony gave me over one hundred pounds No. 1 white honey and the rest averaged about sixty, with an increase by natural swarming of one hundred per cent. A friend of mine who uses all sorts and kinds of hives in his apiary succeeded in making scarcely enough honey to pay for the foundation used in the sections. This was about two miles from my apiary. Long live the Danzenbaker hive! It is just the thing for this locality.

Yours truly,
J. B. HOLLOPETER.

MALLET CREEK, O., Sept. 25, 1902.

I have now 250 colonies of bees, of which 170 are in the Danzenbaker hives, and shall have all my bees in Danzenbaker hives next spring. During this past poor season, 30 or 40 of the colonies in the Danzenbaker hives gave over 100 lbs. surplus. On the average I get more than double the amount of honey from these colonies that I do from those in the old chaff hives. With a 7-inch telescopic cover, the Danzenbaker hive winters the bees better than the chaff hives.

VERNON BURT.

MORE HONEY AND BETTER PRICES.

I have used both square and tall sections in all my apiaries five years, and know from practical experience that it will pay to discard the 4¼ sections, and use only 4x5 sections, and the Danzenbaker hive with the fence separator. They have made enough more this season in the same yard to pay for the hives. I have made *more money* this season per hive than I have any previous year in my 15 years of bee-keeping. Fifteen of my strongest Danzenbaker hives made me a ton of honey. When it comes to sales I get more for the 4x5 sections, and have no work in cleaning them. I ship them as I take them from the super. This is not the case with the 4¼ section. I make honey to sell, and anything that sells the best, and for the most money, is what I want out of the bee-business.

S. D. MATTHEWS.

In Gleanings, p. 931, Dec. 15, 1899.

MOUNTAIN VIEW, N. J., Oct. 6, 1897.

I have run my hives largely with the Danzenbaker sections this year, and shall increase my facilities for the Danzenbaker output next year. I sold all my fancy clover in Danzenbaker sections, glazed, to two fancy grocers in New York, at 20 cts. a section; were retailed at 25 cts. each. My 4¼ sections, unglazed, sold to grocers at 12½ to 13 cts., retailing 16 cts. I furnished cartons with the 4¼, which cost nearly as much as glass.

B. F. ONDERDONK.

BETTER PRICES FOR DANZY. HONEY.

ROCK VALLEY, N. Y., Feb. 22, 1901.

My bees gathered no surplus after July 1. I had only 1200 lbs., but I obtained a fancy price—15½ for "Fancy" and No. 1 white, and 14½ for No. 2 here at my station for all the Danzenbaker 4x5 plain sections, used on your hives, while I got only 14 and 13 cts. per lb. for the 4¼x4¼ square sections, and I consider that much difference is worth looking after—don't you? The Danzenbaker hives doubled up, two brood-chambers, are in fine condition, even better than my double-walled hives. I intend to build a bee-cellar and work off my double-walled hives as fast as I can, and get the Danzenbaker hives.

Very truly yours,
J. L. HAIGHT.

It is not claimed that so large an advance in price as is mentioned above can usually be obtained for honey in Danzenbaker sections, but because it is more uniformly fancy grade, and of general better appearance it commands the highest prices and a more ready sale in a dull market than ordinary honey.

A RECENT ORDER.

INDIANAPOLIS, IND., Feb. 3, 1904.

The A. I. Root Co., Medina, O.

Dear Sirs:—Please ship to me as soon as convenient: 500 Danzy. AD64M hives.

Yours,
WALTER S. POUDER.

(This is in addition to all other orders.)

64-PAGE BOOK.

Mr. Danzenbaker's little book, "Facts About Bees," containing 70 pages, giving full particulars regarding this hive and system, is indeed full of facts. If one follows the directions clear through, he is sure to produce a strictly first-class article of comb honey, providing of course there is any honey to be had. This unique little book will be sent free to all who apply for it.

Bee-keepers are raising honey for the money there is in it, or for the pleasure they get out of it. It is conceded by all who have tried this system that it is highly profitable. Reading over letters from the users of this hive who tell of securing large crops of honey almost free from propolis makes us think that the bee-keeper who is in the business for pleasure would be highly gratified with the hive also. What is more satisfying than to take off well-filled supers of snow-white sections free from the propolis that is so often found on sections in cases that are poorly constructed and adapted for the production of a fancy article?

SPECIAL NOTICE.

The great popularity of the Danzenbaker hive has brought the shallow brood-frame and the tall plain sections into prominence. It must be remembered that no other hive contains the essential features of the Danzenbaker. The success of this system depends on having everything just right, so you should place your order for the Danzenbaker hive with our main office, or any of our branches or regular agents.

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(See list of Jobbing Agents in American Bee Journal, Jan. 7, page 2.)

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Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor. CHICAGO, ILL., JUNE 2, 1904. Vol. XLIV—No. 22.

Editorial Comments

General Advertising of Honey.

On page 339 something was said about the desirability of some general advertising of honey by the National Association. Written probably about the same time, appears in the Bee-Keepers' Review an editorial on the same subject. Editor Hutchinson thinks it would be a good thing to do a lot of judicious advertising in the magazines, and says:

> "It seems to me that there is no way in which the National could spend a few hundred dollars with more benefit to its members than in doing some advertising in a way that will help its members to sell their honey at good prices."

Help Medium Rather than Weakest Colonies.

When a colony has four or five frames of brood well filled, it is in condition for rapid development, while a colony with only two or three frames partly filled will remain at a stand-still till hot weather comes. The beginner may think that his first care should be to help the weakest. Not so; let the little ones wait; a frame of hatching brood may be given to a colony with three frames well filled with brood, and it will not be long till that colony will be able to help others; whereas the same brood given to one of the weakest colonies would still leave that weakling a long time in becoming strong enough to help others.

In general, draw from colonies having five or more Langstroth frames of brood, leaving them with four, distributing this brood among the strongest colonies that have less than four frames of brood. When there are no longer any stronger ones to help, it will be time enough to help the very weakest.

How Many Sections to Prepare for Next Crop.

The belief seems to be on the increase that it is wise to have ready before the beginning of the harvest a sufficient number of supers ready to put on the hives so that there shall be no danger of being caught lacking when the flow is on. But the inexperienced bee-keeper is at a loss to know how many supers of sections that really means. It is better to be on the safe side, having too many rather than too few. Indeed, it is impossible to be on the safe side unless one provides most years more than enough. Fortunately, those left over from one year will be all right to use another year. But now for a definite answer to the question, "How many supers of sections shall I have ready?"

If you have been in the business a number of years, prepare as many supers of sections as will be necessary if the harvest is as good as the best year you ever had, and then one extra super for each colony besides. (Experience will teach you that you will always have some sections unoccupied at the close of the season, unless you combine extracted with comb-honey production.)

But you say, "I haven't been in the business a number of years." Sure enough. Well, then, find out the biggest yield any one else has had in your vicinity, and work on that basis. If you can not have the experience of any one else as a basis, you might count on about 100 sections for each colony as your biggest prospect. In that case, if you have 24 sections in a super, you would need 4 supers per colony for the crop, with one super for the remaining empty sections; in other words, you would have 5 supers ready for each colony.

If you are fortunate enough to have a year in which you will run short after providing 5 supers per colony, then make preparations accordingly in succeeding years.

Trying Spring for Bees and Bee-Keepers.

A number of cold days that puts some of the weakling colonies out of the race; then a day or more of summer that makes the bee-keeper congratulate himself that all trouble is past, only to be followed by another cold spell. But the Fourth of July is ahead, and warm weather can't keep off always.

Asbestos Lining for Hives.

In the British Bee Journal favorable mention is made of asbestos cloth or paper to be used as a lining for hives, with a view to heat it red hot for the sake of disinfecting it in foul-brood cases. In this country there seems to be a growing belief that foul-broody hives may be used without disinfecting. Certainly it can do no harm to disinfect.

Light vs. Dark Honey in England.

At a conversazione of the British Bee-Keepers' Association, Col. Walker said he was "in full accord with Mr. Cowan, Mr. Carr, and most other experienced judges when they said that light honey had the most delicate flavor. There would always be some who liked a strong flavor, such as was found in darker honeys; but whatever might be said, the light-colored honey always 'came out on the top,' and exhibitors must reconcile themselves to facts."

Italian Bees vs. Blacks.

In this country Italians and their crosses are almost universally preferred to blacks. In Europe and in England there are many who prefer the blacks. In a late number of the British Bee Journal, however, Mr. Sladen says:

> In my own apiary (a very exposed one) the crossed bees have proved superior to blacks in many ways. They have dwindled less in the spring, shown better honey-gathering results, and, tested in a badly-diseased apiary in Ireland, they were found to be better able to resist foul brood. In many apiaries in America Italians only are kept and bred, and they are preferred to the crossed bees.

Can the Swarming Trait Be Bred Out?

It has been held by some that centuries would be required to make any appreciable difference in the tendency to swarming, while others hold a more optimistic view. F. W. L. Sladen says in the British Bee Journal:

> "By breeding queens from colonies that do not swarm we may reduce the swarming tendency. In the writer's experience, Italian queens that have been bred for many generations in this way show marked disinclination to swarm compared with ordinary black bees."

The fact that such important results have been obtained in cattle-breeding, for instance, in a very few years, makes one hopeful as to bees. Compare the matter of time. A queen-bee is as mature when two weeks old as a heifer at two years. Several generations of queens can be bred in a year, against one generation of cows in several years. There is now a marked difference in the swarming propensities of different colonies of bees; why can not that difference be further intensified by selection? Suppose A and B start with the same strain of bees, B breeding constantly from those colonies most given to swarming, while B takes the opposite course; is not A likely to have more swarming at the end of five years than B?

Miscellaneous Items

Mrs. G. C. Greiner, of Niagara Co., N. Y., died recently after a long illness from an incurable stomach trouble. Mr. Greiner will have the sincerest sympathy of all bee-keepers in his bereavement and loss.

* * *

The Third Annual Report of the Illinois State Bee-Keepers' Association is ready for delivery. It is an illustrated pamphlet of over 160 pages, and will be mailed to any one on receipt of 15 cents. Order of the secretary, Jas. A. Stone, Route 4, Springfield, Ill.

* * *

Mr. Leo F. Hanegan, the general manager of the St. Croix Valley Honey-Producers' Association, of Wisconsin, wrote us appreciatively as follows, May 23:

> Editor York:—It is hard to get bee-keepers to understand that they must read plenty of current literature on bee-keeping in order to be successful. The main trouble, I think, is that too many of us are too easily satisfied.
>
> Our Association now represents about 2000 colonies of bees, or, with an average crop, fully two cars of honey. Comb honey is produced here mostly.
>
> The American Bee Journal is to me an absolute necessity. It comes regularly, and is always full of valuable information. The Chicago-Northwestern report was worth to any one fully a year's subscription. I should like very much to see that report in the hands of every one of the 200 bee-keepers in this region. In that report, "What the Retailer of Honey Demands," from page 217 to 228, is, I think, worth more to me than all the articles I have read on this subject. Leo F. Hanegan.

* * *

The Apiary of J. S. Haag.—When sending the picture of his apiary (see first page), Mr. Haag wrote as follows:

> I commenced bee-keeping four years ago with 3 swarms (not colonies), for which I paid $9 in trade. A greener man than I was in regard to bees never undertook the business. I bought "Langstroth on the Honey-Bee," and subscribed for the American Bee Journal, and burned midnight oil reading and studying them. The second year I increased by dividing, and rearing my own queens. The last two seasons I worked against increase, and quit last fall with 48 colonies, which I reduced to 31, and last season took a crop of 5525 pounds of honey, all extracted. I winter my bees on the summer stands, and and have never lost a colony except by starvation, caused by being robbed light in the fall.
>
> Although the past winter was a hard one, my bees wintered without loss, and are in fine shape now.
>
> I built a honey-house 16x26 feet, which cost $300, but the bees paid it all.
>
> The people in the picture are myself and all my children excepting one, the oldest boy of 13 years. While we were getting ready for the photographer a bee came singing around his head and he lit out.
>
> Sioux Co., Iowa, April 19. J. S. Haag.

* * *

The Apiary of Charles W. Sager appears on the first page. He wrote as follows, last September:

> I sent a photograph of my bee-yard some days since; there were 111 colonies of bees until Aug. 30, when war commenced. I discovered it about 9:30 or 10 o'clock. I commenced to close the entrances and finally got control of the yard, but they had cleaned out 4 colonies in the meantime. The dead lay in heaps around 20 different hives. Mr. Oltman, who has several apiaries, happened to call, and he said that it beat all he ever saw, and afterwards said I did well in quieting them and not lose more than I did.
>
> It has been too cold and wet, still I can not complain, for what honey I have is of the very best quality. I sold over 200 pounds, and have 2020 pounds in the packing cases, and 64 supers on the hives that are half full or more, and quite a lot with a few sections, so I felt sure of getting about 3200 pounds, or about 57 pounds per colony, spring count (56 colonies), and have almost doubled my colonies, and they are mostly in very good shape now.
>
> Well, I just had a picnic with the bees from May 24 to July 27. I had 91 swarms come out, and two absconded the second day. I doubled up and put back the 91, and made 55 new colonies. Some clustered on the brush, but some went up in the trees that show in the picture—some as high as 40 freet from the ground, but I got them all.
>
> May be I have loafed some, but I made 75 hives and 200 supers while watching the yard, and perhaps you think I shall do the same next summer. Not much, for I have now 50 supers all ready to put on the hives, and shall have 200 filled before it is time to use them, and all the hives that I expect to want, so that I can give more attention to the care of the bees.
>
> I have "A B C of Bee-Culture," and shall get Dr. Miller's and Mr. Doolittle's books; with them, and probably Mr. Alley's, I think I can by sharp work and close attention commence to learn a little about the honey-bee; but if any one thinks it is a lazy man's job, just let him try it. Charles W. Sager.
>
> Benton Co., Minn., Sept. 2, 1903.

The foregoing with picture should have been used long ago. It was delayed from time to time, but its value is not lessened on that account.

* * *

Western Illinois Convention.—The bee-keepers' society, which was organized in Galesburg last January, held an interesting and instructive meeting recently. A business session was first held, and to broaden the scope of the organization the name was changed to the Western Illinois Bee-Keepers' Association.

The question-box was the principal feature of the meeting, it being the best way to bring all present into the discussions.

Mr. Reynolds, who has had experience with foul brood, that dread disease of the honey-bee, gave a very interesting talk on its symptoms and cure at both the forenoon and afternoon sessions. His talks were full of interest and instruction, and the bee-keepers of the vicinity who did not hear him missed a good thing. The meeting adjourned to the third Tuesday in September next.

Mr. E. D. Woods, who sent us the foregoing information, wrote May 12, as follows:

> "Winter losses, through this part of the country, are much greater than reported six weeks ago. There was a good deal of spring dwindling."

* * *

Too Much Maple-Sugary Sweetness.—We have received the following from H. D. Tallady, of Emmet Co., Mich.:

> Editor York:—Enclosed find a clipping from a Glens Falls, N. Y., paper If maple syrup would affect cattle in such a manner, what, in your judgment, would the effect be to the human family? And still many people insist upon eating the "deadly" maple syrup when honey, nice and pure, can be had equally cheap! We do some "insisting" ourselves. H. D. Tallady.

The clipping referred to reads thus:

> "Last Sunday, while Mrs. Ellen Gillingham was away from home, her cattle got into the sugar-orchard and drank a quantity of syrup. As the result two cows are dead, and one other is not expected to live."

You know the old proverb, "One man's meat is another cow's poison." That may not be the exact wording, but something to that effect. Besides, those cows probably took an immoderate quantity. A pint or so at a time might be a good thing for them, while several gallons might result disastrously. If our good friend who sent the clipping will swallow at a sitting several gallons of either maple syrup or honey, he will probably find that one member of "the human family" will "insist" on feeling rather uncomfortable.

Sketches of Beedomites

J. W. TUCKER.

We received recently the following lettter concerning Mr. J. W. Tucker, a bee-keeper of Jefferson Co., Pa., who departed this life in April:

> Editor York:—It is with sorrow that I write to tell you of the death of Mr. J. W. Tucker, who passed away April 6, at 12:30 p.m. He became seriously ill in January, and after being treated some time by home physicians, and failing to improve, he made a trip to Jefferson Hospital, Philadelphia, where he came under the care of eminent medical authority. It was found that, as decided by his home physician, he was suffering from diabetes. However, after two weeks' treatment he returned home somewhat improved, only in a short time to grow worse, and the culmination of the disease resulted in his death as stated.
>
> Mr. Tucker was a well-known apiarist, and possibly the best authority on bee-culture in this part of our State. He began five years ago, and, in connection with his trade as a carpenter, built up a nice

apiary of 55 colonies, of which he was very fond, and to which he had decided to pay careful attention, making it his sole occupation. He invented what is known as "The Tucker Hive," which has proved to be an excellent article in the safe keeping of bees.

He was a constant reader of the American Bee Journal—"The Old Reliable," as he called it—and no one of its readers appreciated it more. He often spoke of it.

While we miss him sorely, especially since he was a comparatively young man—only 42 years of age—yet we are comforted to know he was prepared to go, as during the last few days he said, "I am going down to the station every day, for my train is soon coming in, and then I'll go to my Lord."

THE LATE J. W. TUCKER.

We intend to carry on the business as he would have done had he remained.

Yours truly,
MRS. J. W. TUCKER.

Surely, Mrs. Tucker will have the heartfelt sympathy of the readers of the old American Bee Journal in her sorrow and loneliness.

Contributed Articles

Not All In Hives—More in the Man.

BY G. M. DOOLITTLE.

A LETTER lies before me. Among other things it contains I find these words:

> "I have come into possession of two colonies of bees in box-hives. I am thinking of using these as a beginning in bee-keeping. I shall want some new hives this season, and I am anxious to start with the right kind of a hive so I may meet with success. A neighbor of my brother's where I visited last fall claims to have invented a hive that is ahead of anything in the world. Says he secures lots of honey with this hive, while those not using it get very little surplus. He wants to sell me some hives. Do you think there could be one so very much superior to any other in the world? What would you advise in the matter?"

As I receive many letters quite similar to this one, I thought a few words bearing on this subject might not be amiss in the American Bee Journal. From the above, as well as from many who are clamoring for the *best* hive, it would seen that all one had to do was to get that man's *own* hive, or the Danzenbaker, Root, Hoffman, Gallup, Langstroth, Heddon, or some other "best" hive (for they are all "best" in the eyes of some), to meet with certain success in apiculture. No matter how poorly attended to, if we only have the *best* hive we *certainly* shall have honey to sell and give away! So the hive advocated is purchased, left with some man keeping bees in a slipshod way to hive swarms in at a dollar a swarm, after which the "best" hive, bees and all are deposited in some out-of-the-way fence-corner, where the bees will not sting the children, to stay and take care of themselves.

From the many failures in the bee-business with would-be beginners, and the shipwreck ending in disaster of so many who start out joyously when embarking in the business, it would seem as if they depended simply on using or having their bees in good hives. While a good hive has *very much* to do with the results of bee-keeping, the *man* who manages affairs has *much more* to do with the success or failure of the enterprise.

Do any of our horsemen buy choice animals and put them in the *best* stable, and then let them take care of themselves? Do any of our poultry breeders buy poultry stock and after making *nice* pens for them, pay no further attention? No; they spare no pains to have them properly cared for, and give them every chance in their power that looks or tends toward success. Yet, if we are to judge from what has been done in the past, these same men, should they embark in the bee-business, will expect a large income from bees if they only have them in a good hive, if they pay no attention to them for six months, more than a few times to look at the bees going out and in at the entrance. About as well provide good quarters for the choice stock, and then let them shirk for themselves, expecting a profit from them. Men do not do this way with the stock, and why should they with the bees? The idea that bees "work for nothing and board themselves" must be banished from our thoughts before we secure much profit from them.

I know there are some advocating at the present time, that to best succeed we must keep *more bees.* And others are apparently advocating that the seeing of these "more bees" three or four times a year is all that is necessary. It is barely possible that these may yet live to see their mistake. To me, successful bee-keeping is not on the let-alone plan, nor the whole of it of a "play" nature, only as the enthusiast sees play and fun along the line of work in the apiary.

Successful apiculture means work for a man with brains enough to know that he must leave no stone unturned that tends toward success. A good hive in the hands of such a man is a power which rolls up tons of honey, and shows the masses that there is money in the bee-business. Such a man will have his bees in readiness for the honey harvest when it comes, and do things in just the right time to secure the best results.

I am often asked, "What advantages have the hives of the present over those of a half century ago?" Much in every way, in the hands of a skillful apiarist; but none at all with the man who takes no advantage of the benefits which the movable-frame system brings within his reach.

What are movable frames good for if they are never to be handled? if we never look after the welfare of our colonies by the way of seeing that they have stores for winter and in early spring? if we never look after the goodness and prolificness of the queen inside? if we never use any of the means they provide us with for making our swarms, without watching all summer for them to issue in the good old way? or by giving stores, from those having more than an abundance, to the needy, and by the superseding of inferior queens with those from the most improved stock that can be procured? And yet we have many would-be bee-keepers who never take a frame out of a hive once a year, and wonder why they don't succeed as does their energetic neighbor who takes advantage of all these things. Is it any wonder that we have plenty of candidates for blasted hopes?

I do not want it understood that Doolittle is advocating that a person is to keep constantly overhauling his hives, in season and out of season, in order to make bee-keeping a success. No, not that. What I mean is, that when a gain is to be made by looking inside of a hive, do it, and at just the time it is needed. Look after the stores in the spring just at the right time before any colony restricts brood-rearing through shortness of the same. Put on the sections in just the right time according to the honey harvest and the strength of the colony, both of which are to be ascertained by the *man* through his thorough knowledge of his location and the inside workings of the bees in the hives. Make the swarms in just the right time, through the knowing of when each colony is ready. And so on down through the list, with all the work in the apiary; and do not keep any more colonies than you can care for and have everything done in good order.

I firmly believe that better results can be secured in this way with 50 colonies, than can be with 100 on the let-alone plan, or that of not seeing them more than three or four times a year.

What I want to impress upon the minds of the readers of the American Bee Journal is this: That a thorough, practical apiarist will succeed with almost any of the frame hives now in use, by properly looking after his bees and caring for them; while a careless, "scarcely ever look at your bees" man will not pay his way with the best hive ever invented. Onondaga Co., N. Y.

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Shall Bee-Keepers Make Their Own Hives?

BY H. C. MOREHOUSE.

THIS is one of those peculiar questions that may be truthfully answered by "yes" and "no;" a question upon which bee-keepers will never all agree, and which one must settle for himself, being governed wholly by individual conditions.

Some bee-keepers are fitted by both temperament and environment to manufacture successfully a large portion of the equipment used in their apiaries; others are not. Unquestionably, it has paid me during the past four or five years to make my own hives and supers; more recently I have added brood-frames, pattern slats and separators to the home output, and this, also, has paid. But I have neighbors that it would not pay, and who could hardly be induced to undertake it—and they are wise.

When I decided to take up bee-keeping as a life work, my capital consisted of a very large stock of ambition and enthusiasm and a mighty small bank account. In order to get a start under these conditions I was forced to economize —to stretch each dollar to the limit. I started the season of 1900 with 15 colonies of my own, 25 leased colonies in soap-boxes, and 30 empty hives. These hives were of my own manufacture, and were slowly and laboriously "carved out" with the proverbial "saw and hatchet." Looking back now, I do not believe it paid me to make those hives in that way, and I certainly would not advise any bee-keeper who can convert his time into cash at the rate of one dollar per day, to follow that example. However, that labor, arduous as it was, was sweetened with enthusiam, and the enjoyment derived therefrom was some recompense.

In the succeeding years my increased annual needs in this line have rendered hand-manufacture out of the question. I now hire the use of the necessary machinery at the planing mill, paying 25 cents per hour therefor. Of course, I had to learn to use saws, dadoes, etc., and to adjust them to do absolutely accurate work. This requires care rather than skill and deftness, and it is not beyond the reach of the average bee-keeper. My fingers are all intact, and I have only been hit once by allowing a board to catch on the saw —result of carelessness.

During the present season I have made 600 10-frame supers and 100 single-story 10-frame hives. A statement of the cost, together with a comparison with the price of the same goods, factory made, will be a convincing proof that I saved enough money to make it worth while.

The supers were made complete, including slats and separators. The lumber was No. 2 stock boards, double surfaced, contained some knots, and cost $24 per thousand feet. The corners were halved, and hand-holds were cut in the end-pieces. There is occasionally a loose knot that has to be covered with tin. The work was neatly and accurately done, will compare fairly well with any factory work. They cost me, approximately, 15 cents each. I figure in my labor and time at $3.00 per day. Ten-frame supers, eastern make, cost in Denver, 38 cents apiece. The saving in cash on these supers amounts to fully $150, taking into account the freight from Denver to this point.

The hives were made in the same general manner. The frames are thick-top, plain, unspaced. A plain, cleated bottom, and Gill (muslin-roofed) cover, complete what, in my humble judgment, is as good a hive for all practical purposes as has ever been constructed. I am using such hives side by side with the more complicated and costly affairs, and there is no difference whatever in the results, summer or winter. This lot of 100 hives in the flat cost me exactly $40. Ten-frame one-story hives with "Colorado" covers (not as good as the Gill cover), are quoted by Denver dealers at $1.05 each. Here is another saving of at least $70, including the freight.

There are hundreds of bee-keepers throughout the United States, situated as I am, that it would pay to manufacture their own hives, supers, etc. Especially is this true of the specialists who use large quantities of such goods. In localities where machinery is not readily accessible, I am not sure but it would pay the bee-keepers to club together and purchase the necessary machinery for doing such work. The cost of a small plant is by no means prohibitory. Where water-power is available the expense would be very small, and where this is lacking gasoline can be utilized with satisfaction and economy.

One fallacy that bee-keepers ought to get out of their heads is that good hives cannot be made of knotty lumber. They can be, and, if properly painted, as all hives should be, will last as long as the man who made them, and render sterling service.

Fancy, parlor-furniture hives go very well with lawn apiaries, where bees are kept for pleasure rather than profit, but the man who keeps bees and produces honey as a solution of the "bread and butter problem," and whose apiaries are scattered in all kinds of locations and exposed to the fury of relentless storms and burning suns, will find it to be to his advantage to tie up just as little money as possible in hives and other apiarian fixtures. The elements will soon reduce the most palatial "home of the honey-bees" to a level with the roughest looking home-made hive,' with the chances being greatly in favor of the rough hive giving longer service than the "palace," and looking better after five or six years of use. Boulder Co., Colo.

Convention Proceedings

Report of the Onondaga Co. (N. Y.) Convention.

The Onondaga County Bee-Keepers' Association met in Syracuse, N. Y., Jan. 14, 1904. Owing to the exceptionally heavy snowfall the previous day, the attendance was small. The minutes of the last meeting were read by the secretary, J. H. Cunningham, and adopted. Mr. Irving Kenyon, of Onondaga County, then read the following paper on

IMPROVED METHODS OF PRODUCING COMB HONEY.

Upon this subject of whether we use improved methods in producing our honey, depends the returns we will get for our time and money spent with the bees.

One improvement a great many, if not the majority of bee-keepers, could make, is in securing their supplies in the fall. November 1st is late enough to order them, and then the bee-keeper won't have them in his shop much before Dec. 1, if they have to go by rail.

Having his supplies in his shop, say on Dec. 1, will enable the bee-keeper to busy himself during the stormy days of winter in putting sections together and filling them with foundation; cleaning and filling supers, and any and *every* other work that will save him time next summer during his busy season.

This will allow the bee-keeper to keep more bees, if he can find pasturage for them, so he can make a business of the bee-business, which I think would be an improvement over keeping a few, to be neglected when the bee-keeper is busy with other work, which is too often the case.

Some bee-keepers say they don't care to have their money tied up in supplies until they feel sure of the prospects for honey, and know they will need them. When they do finally send in their order for supplies, about May 1, there may be 50 or 100 orders ahead of theirs, and when their goods are delivered to the railroad company, the bee-keeper is never really sure they are coming through with no vexatious delays. I have known of cases where the bee-keeper, after making numerous useless trips to the freight house, was worrying and wondering if his goods were ever coming, and when they did come he was in a stew till he got them ready and on the hives. By this time the season was from two-thirds to three-fourths over, and the result was he had a lot of unfinished sections, had lost a part of the honey crop, and had just what he sought to avoid—his money tied up in supplies to carry over.

I don't know that we can call it an improved method, but it surely is an important point to have our dish right side up when Nature is ready to fill it with honey.

As we are to consider those things an improvement which return us the most money for our time spent with the bees, we will now look at the question of sections.

This is another place where we should use the most improved method, or the one that pays the best. When I sold my honey last fall I received 3½ cents more per pound for the honey in one kind of section than I did for another. It was all produced in the same yard, and at the same time, and all sold to the same man, so you see the style of section makes a difference.

Of the different styles of sections we have to choose from, we have the 4-piece to nail, the 4-piece dovetail, and the 1-piece, and these are made either with bee-ways or the plain no-bee-way kind. My preference is for the 4-piece bee-way kind, for the following reasons:

First, they weigh 40 pounds more per 1000, and at the low price of a shilling per pound the difference in weight will pay for the sections.

Second, if we use the 4-piece dovetail, and glue the corners, we have something that will stay square, thereby avoiding the annoyance of, having the section spring cornerwise, or, as we say, become diamond-shaped, as is so often the case with the one-piece, causing the edge of the foundation to touch the side of the section before the foundation has cooled, leaving the foundation insecurely fastened, and many times causing it to fall, the result of which is wasted super-room, or a box of ill-shaped honey.

Third, a great many of the 1-piece sections will break in folding, which loss must be added to the original cost, and, what is still worse, many break after they are full of honey.

As between the plain and bee-way sections, my preference is for the bee-way kind, for these reasons:

First, because my experience has failed to show me that any more honey can be secured by using plain sections than those with bee-ways, while the supers to hold plain ones cost three or four times as much, and have more loose pieces to handle.

Second, we want to protect our honey from the accumulating dust in a store, from punctures by careless handling, and from sudden changes of temperature. Glassing protects the honey and still leaves it exposed, to tempt prospective purchasers. Plain sections we can't glass.

Third, glassed honey brings from 1 to 2 cents more per pound than the same honey unglassed. Besides that, we get good pay for our time glassing it.

The principal thing in favor of the 1-piece sections is that they can be put together in less time than the 4-piece. But with a good machine from 1500 to 2000 4-piece sections may be glued and put together in a day.

As to the super, it should be as cheap as possible and still retain all the good points of a good super. It should have as few loose parts as possible. It should be made so the honey can be easily gotten out without danger of being injured. It should be arranged so the sections will come as close to the brood-frames as possible. It should be as light as possible, so as to save weight in hauling to and from out-apiaries. If our hives, supers, etc., are uniform, and the wagon-box is made to fit them, I have found it no more work to load and tie on the stuff for 1000 colonies than it was to do the same for 400 colonies where the supers, etc., were of several sizes, and none of them fitted the wagon-box.

Our hives should be so the frames can be examined as quickly as possible. I remember a visit I made to an out-yard once to clip the queens. The bees were about half in two-story chaff hives, many of the frames of which were stuck to the bottom-board so that after prying a frame loose from the adjoining frames, and trying to lift it out, I many times lifted the whole two-story hive and all its contents. I can remember now just what I said I should like to do with those hives.

Whatever hive we use, the frames should be so they can be taken out nearly as easily after the bees have occupied it five years as when new.

If we visit an out-apiary of 100 colonies, and it takes 1½ minutes longer to go through each hive than it would if the hives were constructed differently, it would take 150 minutes, or 2½ hours, longer than it should. So the most improved hive is the one that has the most other good points, and can be handled the quickest.

One thing that should be aimed at in the construction of any hive, is to keep a warm and uniform temperature in the super. While I don't think that hives will gather honey, I think some hives will furnish conditions that will induce the bees to store more honey in the supers. In my observations in a dozen or more yards, I have found that the two-story chaff hive spoken of would have more honey every time than any other hive in the same yard. And in seasons that were called failures these hives would have a fair crop. Others have told me this has been their experience with this hive.

So our improved method is in a hive that can be handled rapidly, and that will maintain a warm and uniform temperature in the super.

When the swarming season arrives, if it is inconvenient to be with the bees at all times, we must use some of the plans to prevent swarming. My preference is the removal of the queen. This plan keeps nearly all the bees working in one hive during the best honey-flow, and secures as much honey as any other plan, according to my experience. An improved method of producing comb honey should not only aim to cost the bee-keeper as little as possible, but to place it on the table of the consumer in the most tempting form. My experience in retailing honey has been that the majority of consumers of honey know nothing about honey except that they like it if it is good. How often I have been greeted on a second visit with the cry, "That honey you sold me all went to sugar!" Or, "What makes your honey all turn to sugar?" Sometimes they bring out a plate containing a piece of comb honey for inspection. They act in a kind of, "It don't seem possible, but there it is, anyway," and will tell you they are "fond of honey, but don't like that stuff."

Another reason why I mention this matter is, I so often see honey stored in ice-chests in stores, and have seen dealers in honey hire it stored in a cold-storage plant, because they thought that the best place for it. Stores almost always place honey in the meat market unless some bee-keeper has taught them better. I saw some fine honey being retailed in a meat market this winter for 25 cents for one-pound boxes. Now, if a customer buys one of those boxes, and finds when he gets home that it is almost solid, and doesn't know what to do with it, he will feel as if he had lost that quarter; while if it pleased him he would probably buy a dozen more before spring.

Bee-keepers should remember that the fall is the time that honey is most likely to granulate. If it has been kept warm until Jan. 1, it will stand more cold after that than it will soon after coming from the hives.

I think it would be a good plan to lay a paper large enough to cover the sections in each shipping-case, and print on it, with red ink and with type large enough to be read without glasses, "Please Keep this Honey Dry and Warm. Don't Store in a Cellar, Meat Market, Ice-Chest, or Cold Storage."

As this is an age of improved methods, and we have met to-day to exchange knowledge gleaned in our work in our chosen pursuit, I will take up no more of your time, but will leave it to some one better able than myself to discuss it.

Irving Kenyon.

R. F. Holtermann—What style of section brought the better price?

Mr. Kenyon—The 4x4½ bee-way section, glassed.

Mr. Betsinger—For how long have you practiced caging the queen to prevent swarming?

Mr. Kenyon—I got the idea from P. H. Elwood. He has practiced it for 15 years. When the queen is returned and begins laying, the honey that has been stored in the brood-chamber is moved up into the sections, and the sections are better finished.

Mr. Betsinger—This new idea is very good, but my advice is, go slow. I tried this plan of removing the queen in 1874. After holding the queen for two weeks and returning her they would swarm in 24 hours. I don't know how Mr. Elwood can manage. The queen was taken out and put into a nucleus. When the queen was returned they would swarm without any cells.

Mr. Kenyon said that was the plan he followed, but without the after-swarming. The different results must come from some other causes which had not been mentioned. He knew that if the queen were caged in the sections they would swarm.

Mr. Betsinger—And in that case they would get pollen in the sections.

FUMIGATING HONEY WITH CARBON BI-SULPHIDE.

W. J. Morgan told his experience in treating comb honey with carbon bi-sulphide to avoid wax-worms appearing in the sections after they had been placed on the market. He used an ounce of carbon to 13 cubic feet for 24 hours in a practically tight room in a temperature of about 70 degrees. The worms and eggs were all killed.

Pres. House said that he had used as high as 7 pounds of the drug in a room 10x11 feet by 7 feet high. With this treatment he could kill a worm on the floor, but on the shelves where the honey was it did not work. He now piles the honey on the floor, sets a chair over it, and throws a blanket over the chair. When using too much he found that the honey afterward would be thin, and ooze out of the cells.

Mr. Morgan said that he had no such evil results.

Mr. N. D. West told how he used carbon bi-sulphide for killing bees. He gave a humorous account of its explosive action in throwing hive-covers into the air.

Mr. Kenyon—Is it necessary to fumigate the honey? If honey is piled so air can pass through it there is not much danger of moths. Mr. Elwood and Capt. Hetherington both do this. Where the honey is piled tight, and pollen is present, moths are worse. They are also worse in honey kept in a hot room. A cool honey-room prevents moths.

Mr. Betsinger—In piling honey I pile it very solid to keep out the air and keep the honey from getting watery and granulating. If this is done it stays thick, and will last for years without granulating.

Mr. Betsinger dwelt at some length on the careful production and handling of comb honey. It should be cased and piled so there would be no drip. There should not be a teaspoonful of leakage in a thousand pounds of comb honey. He recommended using wide-frame supers so the sections could be handled by the frame and not by the section. As for carbon bi-sulphide, it is safe anywhere as long as there is no fire near.

Mr. Holtermann—We know that a certain percentage of this gas in the air coming in contact with fire will cause an explosion, and we should recommend caution in its use. As to the necessity of carbonizing comb honey, we can be careful to avoid breeding-places for moths, and so keep down their number and reduce the danger.

Mr. Betsinger—One moth lays 5000 eggs every 12 hours, and can do the whole business. They never lay eggs in combs where there are no bees, so the eggs are laid before the combs leave the hive.

Mr. Elwood—If this is the case, supposing you keep honey for two weeks during the hot weather that we have at the time of taking off comb honey and no moths are present, it is perfectly safe to sell without carbonizing.

W. Z. Hutchinson said that even in such a case the eggs might lie dormant until the honey was in the hands of dealers. Storing in a warm room might cause them to hatch.

Mr. Betsinger—We must remember that the dealer doesn't know anything. We must hold ourselves responsible for the honey until it is consumed.

Pres. House—Worms in the honey disgust the people, and injure very seriously the market for honey. It is better to be on the safe side, and always fumigate your honey.

Mr. Holtermann—As to the best methods of fumigating honey, our experimental stations should work on these points.

(Continued next week.)

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

What Caused the Bees to Die?

In the last two days my bees have died by the thousands. I can not imagine what is the matter with them. Can you tell me? I have examined the American Bee Journal, but fail to find out what ails them. Part of them get home, but the ground is covered with them for yards around. I will send you a sample. MRS. LOU O. KING.

Garfield Co., Colo., May 9.

Hard to tell what is the trouble. Nothing can be told by the appearance of the bees except that they died on their way home instead of on the outward-bound journey; for they have pollen on their legs. It is possible that the weather had something to do with it, being so cold that they fell to the ground chilled. But the weather may have been warm, and there is some occasion for fear that there was poison in the case. In spite of the fact that spraying fruit-trees while in bloom is a waste of labor and material, and even a damage to the fruit-crop, there are yet some fruit-growers foolish enough to spray with poisons the fruit-trees upon which our busy little pets are working hard to help the fruit crop. Some States have laws making it a penal offense, and it is hoped other States may follow their good example.

If the bees have been killed by poisonous spraying, there is, of course, nothing that will now help; but for the sake of the future it may be well enough to make some inquiry, and if it can be ascertained that fruit-trees were sprayed when in full bloom, a little special pleading with those who sprayed may have some effect in preventing a like occurrence another year.

Heavy Loss in Wintering.

Our bees did not winter well this year. Out of 40 colonies we have 3 left. Our neighbor, Mr. Kiger, had 1 left out of 10 colonies; another neighbor, Mr. Pugh, had 24 colonies, and has 2 or 3 left this spring. Almost everybody else in Wood County met with the same results.

Wood Co., Ohio, May 15. MRS. D. S. GILGER.

To Make Flat-Irons Smooth.

Beeswax and salt rubbed on flat-irons will make them as smooth as glass. Tie a lump of wax in a bit of cloth and keep it for the purpose. When the irons are hot rub them with the wax rag and then on a paper well sprinkled with salt.—Chicago Daily News.

A Sister's Interesting Experiences.

DEAR MISS WILSON:—Time flies so rapidly that months (almost 12 of them) have passed since I determined to write to you. I want to assure you that your efforts in our behalf, as bee-keeping sisters, are much appreciated. We are indebted to you, and each should feel in duty bound to cast in her mite to help make our department interesting and profitable.

After so long a silence I hardly know where to begin. Perhaps it would be well to begin at the beginning and tell you I am a poultry-raiser, and for years had thought I would like to try the combination of bees and biddies. Finally the combination became possible, and in the evening of a damp, cool day, about the middle of April, 1902, I became the possessor of 3 colonies. I did not know a thing about bees, but the first thing I did was to fall desperately in love with them, and then began to study, and have, I think, learned a few things by experience.

One reason I like bees so well is because we have to *think* out new plans of managment. Many things I learned in the management of poultry have helped me in the management of bees, and the combination has worked very nicely so far.

My study of bees began by visiting a bee-keeping friend. While there I examined a vacant hive and learned the use and the names of the different parts; also saw the smoker used and the frames of brood examined. I borrowed back numbers of the American Bee Journal, and read them carefully. Next I sent for a smoker and the little book "Bees and Honey," and enjoyed every word of it.

Examining my bees I found one colony very weak and one quite strong, the other just medium. The strong one had a fine, large queen, said to be the daughter of an imported Italian.

Some one told me if I would divide the 2 stronger colonies there would be no swarming. This I proceeded to do according to directions in my little book. Did it prevent swarming? Not much it didn't. I thought at the time it made them just that much worse, for they swarmed, and kept on swarming until the last of August. I know now that they were mostly the little after-swarms that kept coming out, but to me then they were a constant wonder and surprise.

I lost but one swarm. (For fear I forget it, let me say here that this was a young queen that had been hatched and also laid eggs in that hive that summer; the old queen had been taken from that hive when I divided them). I put back several swarms, and at the close of the season had 9 colonies. No. 9, however, I thought was not strong enough to go through the winter, and quite late in the fall I united it with the parent colony. The 8 colonies came through the winter in good shape.

April 29 and 30, 1903, when fruit-trees were just in bloom, came the snow and hard freeze, so the bees gathered almost nothing until June 1. Much damp, cool weather, and frost early in September, made 1903 an unfavorable year for bees, but at its close I had 13 strong colonies. These wintered well, and all are now busily at work on fruit-bloom.

I have tried several ways of outdoor wintering, and later in the year I will write of them. When I first began bee-culture I was much worried that so many were drowned in the large water-tank, and would leave my work many times each day to fish them out. One day, while thus "rescuing the perishing," I noticed an old gunny-sack beside the tank that had been partly trodden into the muddy water. It was nearly covered with bees. This gave me an idea, and immediately I got a gallon crock containing a nice, clean gunny-sack and clean water, and placed it in my little apiary. They now have two such drinking cups, and I will have to add another as soon as it seems necessary. I wash the crock and sack occasionally, and keep it quite wet. Very few bees go to the tank now.

The first year many of the bees were about the out-closet almost all the time, but last year, about the first of June, a keg that had contained brine was carried from the cellar, and a pail of fresh water was thrown in to prevent it getting dry. It had been there but a short time until scores of bees were drinking there. I placed a board in it for a float, and they were there early and late all summer, and, after that, no bees bothered about the out-closet. What inference do you draw from this? Shall I keep the briny keg out again this summer?

I do all the bee-work myself, nailing the hive-parts together. So far I have had no experience with any excepting the 8-frame hive.

Some of the bees were slow to start work in the super, so I made frames the shape of the brood-frames, but small enough to fit the super. I thought perhaps the queen would go up in them, but so far I have had no trouble in that respect, and the bees work in them readily.

When I am too busy with other work to spend time with the bees through the day, I often walk out to the apiary before retiring, just to hear their busy music, and say good-night. At one time last summer, when the work of cooking for harvest hands pressed heavily, and I had hardly seen or heard a bee for several days, I went one evening to listen to their restful, nerve-quieting hum, but as I neared the hives a most pitiful sound greeted me. It sounded like an agonized cry for help. I ran for the lantern that I might investigate, and found 3 colonies besieged by small, black ants. I deluged hive and ground with cold water, and in a short time all was quiet. Not an ant could be seen by day, but for three successive nights I administered the water-cure to a decreasing number of ants, and have not been bothered with them since.

No, I have not had any great amount of honey, but have had "lots" of pleasure. I have made some laughable mistakes and some that were not so laughable, but, taking it all together, I feel that I have done very well. And, now, if we have a favorable year, next September I'll be ready to show you "scads" of honey. AUNTIE BEE.

Western Kansas, May 12.

You are right, one of the pleasures of bee-keeping is that there are always new plans to be thought out. No matter how long you are a bee-keeper, you will never reach the point where there is nothing new to plan about. It is as fascinating as a Chinese puzzle.

Yes, by all means have salt in one of their watering-places, for the bees seem to be very fond of it, and no doubt they need it.

You will probably find it is much easier to get bees started on a new watering-place if baited with salty water.

"**The Hum of the Bees** in the Apple-Tree Bloom" is the name of the finest bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us *one new* yearly subscription to the American Bee Journal at $1.00.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

THREE ORIGINAL KINDS OF BEES IN AMERICA.

So, Dr. Blanton, of Mississippi, inclines to think that altogether apart from importations our country once had three kinds of bees—the ordinary black bee, a somewhat larger and browner bee, and a nearly jet-black bee of smaller size and very bad temper. Similar ideas have several times got into print during the last 30 years, but not much seems to have come of the matter. If the brown bee of the southwest was a distinct kind capable of being propagated by itself, perchance by this time it may be too late to rescue it from the general mix. Page 269.

WOULD PUT HIS QUEENS AND METHOD ON LILLIPUT.

As to Mr. Laws and his queen-rearing ways, I'm not a competent judge; but I rather think the island of Lilliput is the place to send both his queens and his method. Page 275.

SPECIES OF BEES IN INDIA.

On page 275, the missionary's list of the species of bees he finds in India, is of interest. About species of bees it is desirable to remember that there is a small list of undoubted and universally confessed species; then there is a great list (doubtful if any one person would undertake to round them all up) of doubtful and disputed species. Perhaps I am wrong, but I think Apis bicolor, Apis nigripennis, and Apis socialis fall in the latter division. The undoubted bees of the world (or a part of them) are Apis mellifera, Apis dorsata, Apis indica, and Apis florea. Between the golden and Italians and the Punics is a long distance with many varieties between, but they are all comprised under Apis mellifera. A similar careful packing of the other three great species would not leave much in the bee-line outside, I think. Naturally a certain style of young scientist, as soon as he gets out into the brush, wants to discover an entirely new species of bee—and usually he does it.

"COLORADO'S" PUZZLE ON LOSS OF BEES.

"Colorado's" puzzle as to why his bees died out with no apparent disease is indeed something of a puzzle, but I'll try my hand at it thus: Hauling them from a comfortable to an uncomfortable location in the early spring didn't do them any particular good. Continued cold and wind with little forage started all but the most vigorous ones in the wrong direction (not quite so many young bees reared as spent in the hard struggle of rearing them). And, considering the year, I guess 160 colonies in one place greatly overstocked the location—at least overstocked it in its pollen resources. If a bleak island has forage for 10 colonies, and you put 30 colonies on it, they will dwindle to 10, will they not? Page 281.

FEEDING BEES IN THE CELLAR.

The Canadian experiment of feeding bees in their winter quarters seems to show that it can be done with either of the three foods tried—maple sugar, cull sections, and hot honey kneaded full and stiff with fine sugar. Not much to show which is best. Presumably the term "winter quarters" here means in the cellar, not on the summer stands. Page 293.

HAS THE BEE AN "EYE TO" PACKING POLLEN?

Adrian Getaz is right in denying that the bee's eye is an especially tender organ—plated over with chitine armor like the rest of her body, and well protected with hairs also. If she chooses to butt her bee-bread butter into the cells *a la* billy-goat, the organs of the head will probably stand it all right. But some *evidence* of the thing seems to be called for. Page 294.

THE COVERDALE SWARM INDICATOR.

How about Frank Coverdale's scheme for a swarm indicator? Four incipient queen-cells on a stick to be easily withdrawn from the heart of the colony, examined and slid back again. Details badly need working up. Once licked into shape I think perhaps it might turn out a great saving of the apiarist's time. Page 295.

HATCHING EGGS OVER BEES.

According to page 300, J. G. Norton still hatches the chickens over the bees. Well, well! The following arrangement of super-position we all would admit as likely to work: (1) Strong colony of bees. (2.) Soft, warm nest of eggs. (3) Hen. And if said chicks are not hatched over bees, what would you call it?

On same page J. W. Steele joins the army of those that fail. Only got the eggs up to 75 degrees—too cool by ever so much.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Hiving Swarms on Combs Where Bees Died.

I see that bee-keepers advise saving combs. Would it be advisable to put a new colony in a hive and leave the comb in the frames where the bees have died during the winter? The frames look clean and bright. INDIANA.

ANSWER.—Yes, see last item on page 339.

◆

Comb-Honey Hive and Management.

1. Please give the reason why you prefer the 8-frame dovetailed hive instead of the Danzenbaker for comb-honey production. Would you prefer it in a poor location as well?

2. Which method do you recommend for comb-honey production, the plan given by Mr. Stachelhausen (Gleanings, Jan. 15), who makes a swarm and gives back all the young bees when they come to worker age, or the plan recommended by Mr. Hershiser (May 15), who leaves the queen with the mother colony, and changes this weekly from side to side of the swarm as long as the honey-flow lasts, thus having the bees of two queens in the comb-honey hive? or don't you recommend either of the two? What is to be done with the queen the old queen will rear, when using the first plan? THREE MOUNTAINS.

ANSWERS.—1. One reason is because it is easier to handle the dovetailed, and there is less trouble with propolis; another is, that with so shallow a hive as the Danzenbaker there is more trouble with pollen in sections. My location is what may be called a poor location, for white clover is about the only source of surplus, although cucumbers help out somewhat in the fall.

2. I think I should prefer the Stachelhausen plan. No attention need be paid to the young queen; the bees will attend to that little matter. Of course, if you want to save the young queen you must act accordingly.

Bee-Keeping in South Dakota.

Will bees do well in South Dakota? It is all prairie where I am going.

I intend to read the American Bee Journal, whether I have bees or not. WISCONSIN.

ANSWER.—I don't know much about South Dakota, but I think bees do well there. If wrong, I am ready to be corrected.

◆

Extracting-Combs—Clipping Queens—Size of Extractor for 50 Colonies.

1. If you were going to start an out-apiary and run for extracted honey, and didn't have the extracting-combs, how would you propose to get them—have them built by the bees, or buy them already built?

2. What size, half or full depth frames?

3. What size hive would you prefer?

4. Would it be safe to send to New York State and buy the combs already built?

5. Do you think there would be any danger of getting foul brood started by so doing?

6. How do you think it would work to clip the queens and "let them go" when they swarm, and have some one to report that such colonies had cast a swarm, and then go in a few days and cut out all queen-cells excepting one?

7. Do you think the bees would return to the hive? or do you think they would hunt her up in the grass or weeds?

8. What size extractor would you prefer for 25 or 30 colonies? WEST VIRGINIA.

ANSWERS.—Bless your heart, if I were only as capable as willing, I wouldn't have to scratch my head so often over some of the puzzlers sent in. But when I'm not willing to do the best I can on any questions you have, I'll send a small boy around to let you know.

1. If I could get them at the same price or a little more, I'd rather buy them built.

2. I don't know; probably full depth until I had all I would need for brood-combs; and then if intending to go extensively into extracting as a business, provide a full outfit of shallow extracting-combs.

3. Ten-frame or larger, for extracting.

4. and 5. If you mean hives, yes. If you mean combs, it would depend on where you bought them. If there's no disease in your locality it would be wise to be very sure you got them from a locality free from disease. If not entirely sure on that score, far better have comb built from foundation.

6. Might work; but there would be many failures. Some danger that the old queen would still be in the hive when the young queen would emerge, and then the young queen might go off with the swarm.

7. The bees would generally return to their own hive, sometimes going to another hive which had just sent out a swarm, and sometimes a number of swarms would unite. If the queen didn't go back to the hive, a small cluster of bees might be on the ground with her and possibly a whole swarm.

8. A 2-frame extractor.

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Bees in Fine Condition.

Bees are in fine condition at present, having wintered well. I had 8 colonies last spring. 24 swarms during the season, and harvested 1000 pounds of as nice comb honey as one would wish to see—all in pound sections. I sold it at home for 12½ cents per pound. I put 13 colonies into winter quarters, and I lost one. W. M. WRAY.

Davis Co., Iowa, May 16.

Famine After the Feast.

It looks as if the bee-keepers in this vicinity were to experience the famine this year after the feast of 1903. The winter loss at the very best is fully 50 percent, and the colonies that

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appeared to be strong a month ago have spring-dwindled badly; and what bees are left have to stay at home to keep the house warm, and consequently are getting no benefit from the fruit-bloom which is now on, and will be over in a few days. C. H. Wair.
LaPorte Co., Ind., May 13.

Sulphur for Keeping Mice and Rats Away.

I send a clipping from a newspaper; it is not about bees or honey, but a remedy to keep mice and rats out of corncribs and grain-stacks by the use of sulphur, and, if so, why can't we bee-keepers use it to keep the mice out of our bee-hives and extracting-combs? During the winter I have been bothered quite a little by their getting at my extracting-combs, and I notice, on page 351, that F. Z. Dexter & Sons use it with success to keep out the bee-moths from old combs where the bees have died.

I have heard it said that when a green tree is covered with caterpillars if you will bore a hole in the tree and put some sulphur in it, and then plug it up, the caterpillars will all leave the tree in a short time. I only mention this that if it be so we may gain some knowledge of the use of sulphur.
Hardin Co., Iowa. N. Young.

[The clipping referred to by Mr. Young is as follows:—Editor.]

Ques.—We have been troubled a great deal with rats about the barn and outbuildings. Can you give us some suggestion as to how to get rid of them?

Ans.—If you will sprinkle sulphur on your barn floor and through your corn as you gather it there will not be a rat or mouse around the premises. One farmer who has tried this plan says:

"I have done this for several years, and have never been bothered with rats or mice. I have some old corn in my crib now and not a rat or mouse can be found."

In stacking hay or oats sprinkle on the ground and a little over each load, and rats and mice will not stay where the sulphur is. A pound will be sufficient to preserve a large crib of corn, and is good for the stock and will not hurt the corn for bread.

Disastrous Winter—Good Prospects.

As I have seen no report from this part of the State this spring, I will send a contribution.

The past winter was a very disastrous one to bees; they went into winter quarters (which here is the cellar) very light in stores, and as far as I have learned the losses have been over 50 percent, and in several cases at least two-thirds of the colonies are dead. The greater part of them starved, although quite a number died with plenty of honey in the hive. The hives were badly besmeared, showing that dysentery was quite prevalent.

My own loss up to date is a little less than one-half. I put in 118 colonies, and have from 75 to 80 colonies left, a few of which are quite light. Bees stored no surplus last season after July 10, and when I took off the supers I was well aware that they were light in stores, and I then intended to feed for winter, but my tenant was taken sick just at that time, and the rush of farm-work took my time and attention so the bees were neglected, and I was greatly surprised upon putting them into the cellar to see how they had shrunken in weight since I took off the supers.

After I had them all in the cellar I took down the scales and weighed every hive I thought doubtful, and put supers containing several pounds of partly filled sections upon 40 of the lightest. Nearly all of those thus fed came through alive, and the supers and sections were generally clean.

I found one hive in which they starved, that I marked 46½ pounds; that is what it weighed when put into the cellar Nov. 17; this one had no super left on it.

Bees consumed much more honey last winter than usual, owing to the long confinement and steady cold, the temperature in my bee-room being about 40 to 42 degrees all winter,

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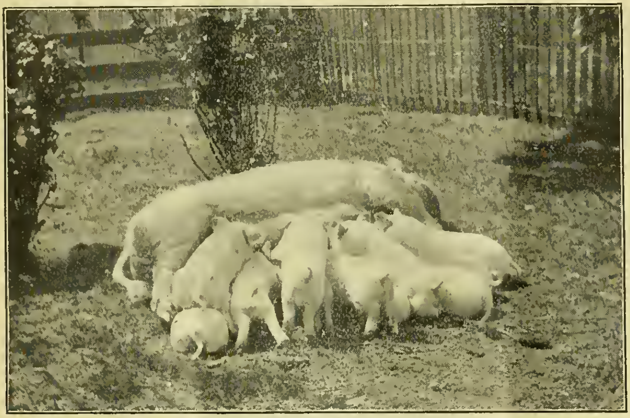

"HOT LUNCH AT ALL HOURS." *Courtesy Ohio Farmer.*

While the above picture has no bearing on bee-keeping, still it will doubtless be appreciated by the great majority of our readers, as they are farmers, and likely have had similar samples of a "Hot Lunch" on their farms.

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which I consider too cold. From 44 to 46 degrees I think is about right.

I set the most of my bees out April 4 and 5, and there was no time after that bees could fly without getting chilled, until April 23, when I placed the rest of them on the summer stands. I had a severe time keeping some of those set out first alive until I could open the hives and feed out-of-doors.

Spring weather came with all of its beauty April 27, when the bees began to get their first pollen from tag-alder. On April 29 the bees began to store honey from this source, and those colonies having a goodly number of bees filled their combs full of willow honey, even attaching new comb and honey-boards in some cases; I tell you, that was a feast for the poor, nearly-starved bees, and a treat for their owner.

This is truly a land flowing with milk and honey, for even our swamps yield a rich harvest of willow honey just when the bees need it so badly; and in the autumn there is a great deal of Spanish-needle and goldenrod on the open parts of the same.

By the way, one colony brought in 6 pounds of willow honey in one day, after the willow was past its prime, too.

The prospect for honey is good now, as clover comes out in perfect condition; I never saw it look better.

There is a lot of work for our inspector to do in this section, as there is foul brood on nearly all sides of me, and I have been very fortunate in not getting any of it yet.

B. T. DAVENPORT.

Green Lake Co., Wis., May 11.

Wintered Well—Prospect Good.

Bees have wintered well in this section of Missouri. I winter mine outdoors, using winter-cases. I packed away 15 colonies last fall, and every one came through all right. White clover is in bloom, and the bees are busy; the prospect is as good, if not better, than last year.

The American Bee Journal is one of the best things I have gotten hold of in bee-culture. And I would not try to keep bees without it.

H. M. GARNER.

Miller Co., Mo., May 23.

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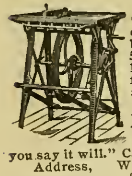

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Beedom Boiled Down

Arizona Honey vs. Eastern Honey.

The Orange Judd Farmer says, in speaking of Arizona honey, that the moisture content is much less than that of Eastern honey, on account of the dry air, and that this also increases the weight per gallon. Five gallons of Arizona honey will weigh 60 to 62 pounds, while the average of Eastern honey is about 50 pounds. The publication also says, in speaking of liquefying granulated honey, that this process darkens and alters the flavor of the honey, and materially injures it quality. It seems to the editor of the Modern Farmer that the Orange Judd Farmer had better hire an intelligent bee-keeper to revise the bee-talk which appears in that paper, and then they would come something nearer telling the truth when they undertake to write about bees or honey. We venture the assertion that no one ever saw a five-gallon can full of honey that would not weigh more than 50 pounds, whether it came from the East or the West. The writer of this paragraph has liquefied and reliquefied hundreds of pounds of extracted honey, and he is absolutely sure that the best expert in the land could not tell the difference in flavor or color after the honey has been liquefied. Others have done the same thing. Therefore we would like to know where the Orange Judd Farmer got all of its information about Arizona and Eastern honey.—Modern Farmer and Busy Bee.

Deadly New Pest Among Bees.

A new and thus far unnamed species of bacilli is beginning to show itself among the bees of San Bernardino County, and unless a speedy means is found with which to exterminate the pest, it threatens to destroy thousands of dollars' worth of bees and honey. County Bee-Inspector R. B. Herron recently returned from Ontario, according to the San Bernardino Sun, where he was called to investigate a serious outbreak of the disease, and he brought with him a block of honey-comb containing specimens of the germs. He reports that in an apiary of 100 colonies, in the vicinity of Upland, 40 have been totally destroyed by the mysterious bacilli. Mr. Herron is doing his best to prevent the spread of the pest, but, not knowing the species of the germs, he is unable to go about the work of fumigation in as thorough a manner as he would desire. Mr. Herron states that he has heard and read of a bacillus which he thinks is identical with the one found at Ontario, but, having never seen it, is not certain. But it is certain that no such germ of half such a destructive nature has appeared in the county for years.—Rural Californian.

Drumming Better Than Brushing for Forced Swarms.

We have had some experience the past summer with forced swarms, which may be of value in showing the best way to make them. The greater part were made by drumming most of the bees and the queen up into a hive containing empty frames with starters, which was then set upon a bottom-board on the old stand. Out of all so treated, not one attempted to abscond; while the swarms that were brushed gave so much trouble that we gave up that plan altogether.—F. H. HARVEY, in Gleanings.

A Bee-Paper a Necessity.

While the reading of a bee-journal may be very enjoyable to a bee-keeper, it is in no sense a luxury—it is an absolute necessity, almost as much as hives, sections or comb foundation. We used to hear bee-keepers say they "couldn't afford" to buy foundation, just as though it were a luxury of some kind. As well might the merchant say he couldn't afford to buy goods, the manufacturer that he couldn't afford to buy anything

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Breeders	5.00	....	....
2 frame Nuclei (no queen)	2.50	14.00	25.00

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Mr. Gus. Picaman, of Litchfield, Ill, in a letter of Aug. 3, 1903, says: "Send me two untested honey-queens. The one I bought of you two years ago is all right. There are no better."

Mr. Frank D. Gunderson, of Oconomowoc, Wis., says in a letter dated August 1, 1903: "I like your queens the best of any that I have ever had." This man placed an order last August for 24 Nuclei to be delivered this spring.

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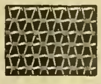

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that brings him more money. If what a man buys brings in more than it costs, then it is a profitable thing to buy—it is not a luxury. If it brings in less than it costs, then it is unprofitable to buy it, and its use should be shunned, unless it is bought because of the pleasure that comes from its use.

For $5.00 a man can get about all of the journals there are published in this country, and, if he ever expects to make a success of bee-keeping, or make as great success as he *might* make, he will spend his first and last dollar for these journals. When I was keeping bees, before I began publishing the Review, I read all of the journals published, and found it profitable to do so. Sometimes one little item alone was worth dollars and dollars to me. A man can't know too much about his own business; and he who can't afford to buy or read a bee-journal will never become a bee-keeper worthy of the name. He who would succeed, simply can't afford *not* to read the journals—*he must do it.*—Bee-Keepers' Review.

Government Apicultural Investigations.

In the volume entitled, "Annual Report of the Department of Agriculture" for 1903, we find the following paragraph relating to the work conducted by Mr. Frank Benton, who is known as the "Apicultural Investigator:"

The correspondence in relation to apicultural matters has been constantly increasing, and has covered a larger range of subjects, including statistics in relation to the industry, methods of managements, new inventions, natural resources of various regions, cultivation of special crops as bee-forage, introduction of superior races of bees, etc.

In the autumn of 1902 a trip was made by the apicultural investigator through Nebraska and Colorado for the purpose of investigating certain conditions, especially in Colorado, regarding natural and artificial bee-pasturage and the early breeding up of colonies of bees to enable bee-keepers to take full advantage of the first crop of alfalfa. The recommendations made to cultivate early pollen-bearing crops, such as Russian hairy vetch, and to employ more prolific, hardy, and strong-winged bees than Italians, such as the Carniolan and Cyprian races and their crosses, have, wherever followed, resulted in a marked increase in the honey-yield and in earliness and size of swarms.

At the request of the bureau of farmers' institutes of the State of New York the apicultural investigator was sent to deliver addresses at a series of institutes held in various portions of that State. These were well received, and much interest was manifested throughout the State in improved methods of apiculture.

Visitors at the apiary maintained on the Department grounds are numerous, including many teachers and normal school students, and during the summer months much of the time of the investigator is taken up in this manner, answering personal inquiries and giving practical demonstrations. Were the funds provided for the apiarian work sufficient, this portion might be acceptably done by an assistant, and these numerous interruptions would be avoided, which prevent more important work in the line of investigations.

Much material in the form of specimens of bees and their products, for use in natural history teaching in the public and normal schools, has been furnished gratis to teachers. This tax upon the time of the investigator has been considerable, and it has been impossible to meet some of the requests.

A number of queens of select breeding have been sent this year, as in the past, to experiment stations engaged in apiarian investigations, and for testing in sections where it seemed advisable to try certain breeds or crosses.

A race of bees little known in this country, the Caucasian, native to the southeastern provinces of Russia, bordering on the Black and Caspian seas, has been under observation. It promises to be a valuable addition to the varieties already bred in this country. The

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We offer for sale, from our stock of bee-supplies, the following list, some of which is new, and the balance as good as new:

20	Wood-bound 10-frame Zinc Honey-Boards	15c each.
1080	New. Clean, Wired Extracting Cambs (L. size)	15c each.
420	New L. Brood-Frames with full sheets wired foundation	10c each.
400	Good L. Brood-Combs	12c each.
1	"New Model" Solar Wax-Extractor (glass 26x60 in.)	8.00.
1	Wooden Honey-Tank with galvanized iron bottom (holds 1800 lbs.)	10.00.
1	6-inch Comb Foundation Mill	15.00.
1	10-inch Comb Founnation Mill	25.00.
100	New L. 10 fr. Dovetailed Hives (each consisting of a Body, Cover and Bottom-Board—all nailed)	95c each.

If you order Combs and Hives, the Combs can be put right into the hives and shipped in that way. All the above can be shipped promptly, so long as they last. First come, first served. What do YOU want out of the lot? or do you want it all? (No order filled for less than $5.00 from the above list.) Also **BEES AND QUEENS**, and Stanley Queen Incubator. Send for free Circular

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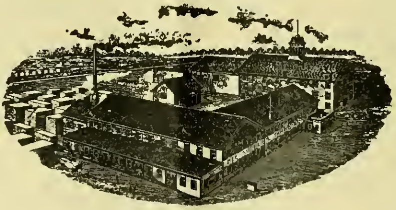

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workers are good honey-gatherers and most remarkably gentle. The queens are quite prolific. The exact status of the race as regards hardiness has not yet been determined, although in Colorado they have not seemed inferior in wintering qualities to the Italians already there.

Further tests in the matter of methods in queen-rearing and the use of small nucleus hives have been continued. The determination of the best and most economical method for rearing queens of the highest type is a subject of prime importance to the industry, and warrants the most thorough investigation than can be given it.

CONVENTION NOTICE.

Texas.—The Texas State Bee-Keepers' Association will meet at College Station, Tex., Tuesday, Wednesday and Thursday, July 5, 6 and 7, 1904, beginning at 10 a.m. on Tuesday. This will be during the meeting of the Texas Farmers' Congress, so it will be a great time. Railroad rates and board will be cheap.

The convention will open at the time named. Come early and take part.

Louis H. Scholl, Sec.
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As has been our custom heretofore we offer to mail a fine, Untested Italian Queen to the person who complies with the following conditions, all of which must be strictly followed:
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We think we have made the foregoing sufficiently plain so that no error need be made. Our Premium Queens are too valuable to throw away—they must be earned in a legitimate way. They are worth working for.
We will book the orders as they come in and the Queens will be mailed in May or June. Will you have one or more?
If you cannot get a new subscriber, and want one of these Queens, we will send the American Bee Journal a year and the Queen—both for only $1.50. Address,
GEORGE W. YORK & CO., CHICAGO, ILL.

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HONEY AND BEESWAX

MARKET QUOTATIONS

Chicago, May 9.—The market has an oversupply of comb honey, very little of which will pass as No. 1 grade—price is 11@12c per pound, and off grades at a corresponding value. Extracted, 6@7c per pound for best grades of white; amber colors, 5@6c per pound. Beeswax, 30@32c. R. A. Burnett & Co.

Cincinnati, O., May 19.—The honey market continues to be dull; if anything, the prices on comb honey are lower; concessions are made on bigger lots. Fancy white comb honey, from 12½@14 cents. Sales on extracted are made at the following prices: Amber, in barrels, 5¼@5¾c; in cans, ½c more; alfalfa, water-white, 6@6½c; strictly white clover, for extra fancy, 7½@8c. Beeswax, 30c.
C. H. W. Weber.

Albany, N. Y., April 25.—Honey market is very dull. Stocks of both comb and extracted are lighter than we thought would be a month ago, when we thought we would have to carry over the season. The demand for honey here will be light until the new crop comes. Quotations are nominally—8@13c for comb, and 5@6c for extracted. H. R. Wright.

Cincinnati, April 18.—The honey market here is reassuming activity, and judging from present indications, and the lateness of the season, the last season's crop will be consumed before the arrival of the new. Amber extracted in barrels and cans, 5½@6½c; white clover, 6½@8 cents, according to quality and package. Fancy comb honey sells at 12@15c. Beeswax, 30 cents. The Fred W. Muth Co.

Boston, May 14.—The demand for honey is extremely light, almost nothing, and supplies are heavy for this time of the year, and our prices therefore are largely nominal. We quote fancy white at 15@16c; A No. 1, 14@15c; and No. 1, 14c, with no call for under grades. Extracted, from 6@7c. Blake, Scott & Lee.

Kansas City, April 18.—The demand for honey is a little better than it has been. Prices on strictly fancy comb are $2.50 per case, if not candied; the great trouble with the majority of honey coming from the West at present is that it is more or less candied, and about $2 00 to $2.25 is all we can get for it; amber is selling at $2.25 per case. Extracted is dull at 5@6c. Beeswax in good demand at 30c.
C. C. Clemons & Co.

New York, May 21.—The market on comb honey is decidedly dull and it is almost impossible to move large blocks. What little trade there is, is done in a small way. We quote nominally: Fancy white at 13c; No. 1 at 12c, and amber at 10c; no demand for dark at all. Extracted is in fair demand at unchanged prices, with a good supply. Beeswax remains firm at 30c, but we expect a decline very shortly.
Hildreth & Segelken.

Philadelphia, May 20.—The honey market has been quiet for the last 10 days, and very little doing. Some odd lots have been sold at very low prices to clean out. The demand during this spring-changeable weather has been very light. There is no fancy comb honey on the market. We quote: No. 1, 9@10c; amber, 8@9c. Fancy white extracted, 7@7½c; amber, 6½@7c. Beeswax has been received in large quantities: prices are a little off. We quote: Bright yellow, 30c; dark, 28@29c.

We are producers of honey and do not handle on commission. Wm. A. Selser.

San Francisco, May 18.—White comb, 1-lb. sections, 12½@13c; amber, 9@11c. Extracted, white, 5½@6c; light amber, 5@5¼c; amber, 3¾@4¼c; dark amber, 3¼@3¾c. Beeswax, good to choice, light, 28@30c; dark, 26@27½c.

Trade is not brisk and is mostly on local account. There is not much high-grade comb honey, and in a limited way it is bringing tolerably good figures. Dark comb moves slowly. Market for extracted is quiet, although values remain steady.

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Bee-Keepers' Supplies
OF ALL KINDS.

Langstroth on the Honey-Bee—Revised
The classic in Bee-Culture—Price, $1.20, by mail.

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BEGINNERS should send for it.
62 pages describing all Bee-Appliances.
6 pages of Instruction.

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44th Year. CHICAGO, ILL., JUNE 9, 1904. No. 23.

WEEKLY

THE LATE C. THEILMANN.
(See page 405.)

It's the Latest. *It's the Best.*

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QUEEN
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THE A I ROOT COMPANY
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Modern Queen-Rearing.

By Geo. W. Phillips, foreman of the queen rearing yards of The A. I. Root Co.

Anyone can supply his own apiary at little cost. This booklet gives simple, complete directions for doing so. All can understand it. The method itself is the best. It is no particular "system" of one man, but embodies the best of all. An expert can gain information from this book while the novice will find nothing that he cannot understand or do.

Price, 15c each, postpaid.

How to Produce Extracted Honey.

Every bee-keeper that runs for extracted honey should read this booklet. It contains much valuable information. Many labor-saving devices and plans are explained. It tells how to care for and run the extracting machine, uncap combs, etc. How to render cappings, broken combs. Also how to put the honey up in the most attractive packages for retailing.

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AMERICAN BEE JOURNAL

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GEORGE W. YORK, Editor. CHICAGO, ILL., JUNE 9, 1904. Vol. XLIV—No. 23.

Editorial Comments

The St. Louis Convention of Bee-Keepers.

The next National Convention will be held in St. Louis, Mo., Sept. 27, 28 and 29. So we were informed by General Manager France on May 28, which is the first official notice we have received. Sept. 27 and 28 are to be International Days; Sept. 29, National Day; and Sept. 30 Bee-Inspectors' Day. Those ought to be four great days for the bee-keepers' of the world, and especially for American bee-keepers. Plenty of time to get ready for a good time.

Bogus Comb Honey and Ladies' Home Journal.

Our attention has been called to the following paragraph, which unfortunately appeared in that usually high authority among all the magazines—the Ladies' Home Journal for June:

> "One cause of indigestion from candy-eating is an adulterant that is sometimes employed—paraffin. This is especially used in caramels in order to make them cut well when poured out on the mould, and it is sometimes found in old-fashioned molasses candy. A most ingenious use to which paraffin has been put in America has been the manufacture of artificial honey-comb. It duplicates the natural comb remarkably well; the little cells are then filled with glucose slightly flavored to give the honey taste, and the artificial product is ready for use. This is not harmful, but it is not honey. Paraffin is not a poison, but it is an adulterant, and taken into the stomach it is indigestible."

This paragraph appears under the department heading, "Pretty Girl Papers," written by Emma E. Walker, M.D., the special topic being, "Is Candy-Eating Harmful to Girls?"

It is simply an echo of the seemingly unkillable Wiley lie about manufactured comb honey, which was started over 20 years ago. But we *are* surprised to find that a paper of such immense circulation and accustomed reliability as the Ladies' Home Journal, should help to continue the misleading and fraudulent statement that honey-combs are made of paraffin, filled with glucose, etc.

We have written Mr. Edward Bok, editor of the Ladies' Home Journal, calling his attention to the untruthful and harmful statement, and requesting the publication of a correction in the first possible issue of his journal. We have no doubt he will be glad to do this, for we are quite certain that Editor Bok would not willingly and knowingly publish what is not true.

We would urge that all our readers also write Mr. Bok, protesting against the appearance of that miserable old comb-honey canard in the Ladies' Home Journal. As the bee-keepers—and especially our women readers—swarm around him with their buzzing letters, he will begin to see that even the statements of some M. D.'s need to be edited. This thing of would-be instructors repeating hearsay matters, or what they possibly have read in some daily newspaper, without taking the least trouble to verify, needs to be stopped. Mr. Bok now has a fine opportunity to set his million subscribers right on the comb-honey question, and as far as possible undo the wrong done to bee-keepers, of which his journal—doubtless unconsciously—has been guilty.

Address letters on this subject as follows: Mr. Edward Bok, Editor Ladies' Home Journal, Philadelphia, Pa.

Newspaper Advertising of Honey.

There are various forms of advertising the use of honey, but perhaps the one that is the most easily and cheaply to be employed at present is that of a contribution detailing briefly the great value of honey as a daily food. There is scarcely an editor or publisher of a weekly or daily newspaper anywhere who would not gladly welcome such contribution or article from his bee-keeping neighbors or friends who subscribe for and read his paper. It is also one of the very best ways of acquainting the general public with honey and its uses.

Mr. J. E. Johnson, a wide-awake bee-keeper of Knox Co., Ill., and one of our esteemed correspondents, has been working along this line lately, and is succeeding. The following is a sample of his efforts, which recently appeared in the Galesburg (Ill.) Evening Mail:

FOOD VALUE OF HONEY.

Few people know the true value of honey as food. A great many children are daily overtaxing their delicate digestive organs and laying the foundation for an invalid life by the excessive use of sugar, candy, and other delicate sweetmeats. If their parents would only give them honey instead, they would not only find it a good, wholesome food, but very restful to their digestive organs, as honey is the only sweet that is practically predigested.

First, let us look into the history of honey. In olden times honey was probably the only very sweet food known, and is quite often mentioned in the Bible. The sons of Israel took honey and spices with them as presents when they went down into Egypt for corn. (See Genesis, 43d chapter.)

In Exodus, 16th chapter, we find that the manna sent from heaven to the children of Israel, tasted like "wafers made with honey." In I. Samuel, 14th chapter, we find that when Jonathan came to the wood he found honey upon the ground, and when he tasted of that honey his eyes were enlightened, and by the knowledge gained Saul's army was able to overcome the enemy. Bees must have been plentiful in those days. They even took up their abode in the big lion that Samson slew, and Samson was fond of honey, and, judging by his great strength, honey must have agreed with him. Several years ago Prof. Benton went to Palestine to investigate the bee-industry, and the result was that we have a particular strain of bees known as the Holy Land bees. They are much like the Italian bees, and are now scattered widely over the United States.

We also find that John the Baptist lived on honey and locusts, and in the last chapter of Luke we find that Christ, the Son of God, partook of honey before the disciples just before asscending to heaven.

The honey to-day is just the same as it was in olden times. It is one of Nature's sweets. But let us look into the matter from a scientific point of view. The physician often recommends honey for sore throat, coughs, and because honey is not only predigested to a great extent, but it is a very good antiseptic. The best remedy known to medical science for fumigating to kill disease germs is formaldehyde gas, because it unites with the oxygen of the air to produce formic acid, and is therefore effectual. Years ago this was not known, and the only means known then to obtain formic acid was from bees or ants, and, strange as it may seem, formic acid, that great germicide, always occurs in honey, and is one of the natural products of the honey-bee; and, although honey does not contain this formic acid in large enough quantity to make it a germicide, it is, however, antiseptic to a considerable extent, and is therefore very valuable in preventing disease. Dr. Gandy, of Nebraska, says that honey is a sure preventive of that dreaded Bright's disease of the kidneys.

I have found honey very valuable in curing tonsilitis by holding honey in the throat so as to keep the tonsil in contact with the honey. A few years ago liquid honey put up in glass tumblers was largely adulterated, but now Illinois has a pure food law which has driven out the adulterated article, and honey bought on the market anywhere in Illinois is the true product of the honey-hee, whether liquid or comb.

Comb honey can not be made artificially. One thousand dollars standing reward has long been offered for a single pound of artificial comb honey. No one has been able to claim it. Any syrup labeled

"Honey Drip" or "Honey Drops" is, of course, not honey, but all liquid honey labeled "Pure Honey" is reasonably sure to be pure honey.
J. E. JOHNSON.

It is always well to present the newspaper editor and publisher with a sample of the kind of honey you are writing about. It will help him to understand your enthusiasm over so good a food article as honey—just *why* you are anxious that all the people shall know what they are really missing when they substitute cheap corn-syrup concoctions for genuine bees' honey.

It may be that after the favored editor has indulged his own taster in the real thing, he will add a word of personal endorsement to what has been written by his bee-keeping friend and subscriber.

No doubt there are some of our readers who will say, "O, I can't write well enough to do that." Well, then take to your local editor an article written by some one else—say Mr. Johnson's—and kindly request him to publish it in his paper. He will doubtless be glad to do so, when he knows that it has your approval. You will then be his authority back of it, and it will go far in enlisting his aid and interest. And all this is not entirely a selfish matter on your part, as it will be a benefit to all his readers.

It may be you have some honey to sell to the readers of the newspaper in which you request the publication of the article referred to. Then it is your opportunity to place your order for a nice paid advertisement in that same newspaper. This will please the editor very much. And, no doubt, he will be glad to take his pay for it in honey.

Why not begin to think about the plan suggested, and put it into operation as soon as this season's honey crop is harvested? Go to the editor of your local newspaper with the contribution on the use of honey as a daily food, and request him to publish it. Also, present to him at the same time a nice sample of your honey. Perhaps it would be well then and there to leave with him your order for an advertisement of honey. If you are a loyal financial supporter of his paper, he is not likely to decline to publish the contribution. It is not easy to "turn down" a good friend and neighbor when so reasonable a request is made. And the information thus given will not only benefit you as a honey-producer, but will be a blessing to those who read it, and who doubtless will follow the suggestions given on the use of honey.

Try it, and then let us hear the results.

Discouraging for Southern California Bee-Keepers.

We have received the following from an extensive bee-keeper in San Diego Co., Calif., dated May 15:

> EDITOR YORK:—The enclosed clipping only partially tells the story, as seven car-loads of bees were shipped to Nevada from this station—10 in all. The shippers had all sorts of bad luck. The first two were thrown off the track the second day, and 30 or 40 colonies ruined.
>
> Owners of one car-load, after arriving at the end of the journey, put 210 colonies in a trail wagon, with a lot of junk on top of all. The team of eight or ten horses was driven with a jerk-line (one-line only, and that on a leader), ran the wagon off the bridge and dumped 50 hives off into the water; the team ran away, and played smash with the remainder. One man lost 40 colonies hauling them to our station.
>
> One car, when up near Stockton (opposite San Francisco), ran into a heavy rain-storm, and going over the Sierras it snowed, and icicles formed on the sides of the hives, a good deal of brood being chilled, and a large percent of the old bees died on the way. All went in open cattle-cars. Some shippers got out of their cars, at the end of their journey, into a snow-storm—most of the men contracted bad colds, and altogether had a miserable trip. In this vicinity all the bees will starve if not fed, many having already "gone up the spout," as there is not a drop of nectar in the flowers. Those near orange or lemon groves may possibly pull through. Mr. Hambaugh took one car. We sent one, too. The trip is over 1000 miles long—over past Sacramento and in toward Salt Lake.

The clipping referred to in the foregoing, reads thus:

> Car-load shipments of bees are to be shipped from this county to Nevada, where the feed is more plentiful. The district where the feed is scarce, and where it is necessary to ship the bees away in order to save them, is near the coast. In the mountain sections there is feed sufficient to sustain life, although not enough for honey-producing. A car-load of bees was shipped from the Linda Vista station yesterday. One or two have been shipped from Escondido.

Surely, this is very discouraging to bee-keepers located in the Southern coast counties of California, where the bulk of the honey of California is usually produced.

Cleansing Beeswax.

Put the vessel containing the melted wax in a box whose bottom is covered 5 inches deep with sawdust; surround the vessel on all sides with sawdust and cover over. The wax will stay hot a long time, and the slow cooling will allow all impurities to settle to the bottom. So says an item in Praktischer Wegweiser.

Miscellaneous Items

Notice.—The Deputy Inspector of Apiaries can call upon any bee-keeper within 25 miles of Chicago, to give assistance about treating diseases of bees. Mail your requests to Herman F. Moore, Deputy Inspector of Apiaries, Park Ridge, Ills.

* * *

General Manager France is having plenty to do in the work of the National Bee-Keepers' Association. He wrote us May 28:

> FRIEND YORK:—Because one of our members did not buy goods of a newly-elected city mayor of Kirkwood, Ill., an ordinance is just passed forbidding any person to keep in the village over 5 colonies of bees. Penalty, $1.00 to $3.00 per colony each month. How is that for an ordinance? Case No. 3 so far this season.
>
> Sixty-five percent of Wisconsin bees, last fall count, are now dead. Clover and basswood promise good.
> N. E. FRANCE.

* * *

Geo. W. Brodbeck, of Los Angeles Co., Calif., Secretary of the National Bee-Keepers' Association, writing us May 24, had this to say:

> "There will be no honey to speak of produced this season in Southern California, and, furthermore, it now looks as if it will prove the most disastrous year we have ever had, for the bees in the honey localities are not securing enough nectar to live on."

We regret to learn that Mr. Brodbeck has not yet fully recovered from his long siege of sickness, which we referred to in these columns some time ago. We trust he may soon be all right again, for it falls upon him, as secretary of the National, to prepare the program for the St. Louis convention, and that is no small duty.

* * *

The York Honey Company is the latest thing in the field of handling and bottling honey, located at 101 E. Kinzie St., here in Chicago. Mr. Henry M. Arnd is the manager of the Company, and the writer is its president. It is unincorporated. The new Company will use on its output of honey the registered label bearing the well-known name, "York's Honey," which, through our efforts for many years, has become a popular brand in Chicago, and even far beyond the borders of this great city.

The office of the American Bee Journal will still be here at 334 Dearborn St., where we have a lease for three years. It is not now our intention to devote any time to the new company which bears our name, further than to assist Mr. Arnd in the buying of stock necessary to run the business, which consists exclusively of honey and beeswax.

* * *

Mrs. L. Harrison, so well known to our readers, passed away at St. Andrew, Fla., May 26, 1904. Mrs. Harrison was one of the old-time correspondents of the American Bee Journal, and lately has appeared among those who furnish expert opinions on questions referred to a list of about 25 prominent bee-keepers. For some years she has been spending the winters in Florida, her home being in Peoria, Ill. When sending us a notice of her departure, Mr. Harrison said that she died after a severe illness of six weeks duration. She had been nearly blind all winter from cataract, and had been a great sufferer, so that death came as a sweet release.

We are sure our readers will join with us in extending to Mr. Harrison sincerest sympathy in his bereavement.

We will publish a portrait and biographical sketch of Mrs. Harrison a little later.

* * *

C. W. Virgin and Mrs. Berthe.—We have heard from another of Mrs. Berthe's many admirers, who evidently is jealous of her reputation. On page 372 we had a few very proper things to say regarding her appointment as superintendent of the apiarian department of the St. Louis Exposition. After reading these remarks, her "Virgin" friend sent us a *postal card* with the following, which we reproduce as nearly as possible in type, as it was written:

> G. W. York:—I suppose if you had been consulted it would have been all right—but now Mrs. Berthe has been appointed and you new nothing about it are sore. Oh yes, we understand there is no personal feeling in the matter, ha-ha. To bad. I feel sorry for you.
> C. W. Virgin.

Lest there may be a very few others who are as far from the truth as is Mr. Virgin, and who harbor in their hearts wrong thoughts of us, we wish to say that we did not expect to be consulted in the matter of the appointment received by Mrs. Berthe; nor could *we* possibly have accepted the position had it been tendered to *us*. So the only "soreness" or "personal feeling" there is must exist wholly in Mr. Virgin's imagination. There isn't a bit of either in us about Mrs. Berthe's appointment.

Now, the proper thing for Mr. Virgin to do is to send us at least two gentlemanly apologies. One for writing at all as he did, and the other for putting it on a postal card. In rather sharp contrast is the following taken from a letter that came in the same mail that brought Mr. Virgin's card:

> "Your editorial reply on the Mrs. Berthe matter on page 372 is fine. Say, wouldn't you have rather a lively time of it if you were expected to go up to Minnesota, down to Florida, and to all other places between, before you dared to say you had never heard of a certain bee-keeper?"

Sketches of Beedomites

C. THEILMANN.

On May 26 we received the following concerning the death of our old friend, C. Theilmann, of Wabasha Co., Minn.:

> Dear Mr. York:—I here send you the sad news of father's death. Our parents are both dead now, and our home is very empty, as you may well know. Two brothers and one sister are married; one brother and myself are, or were, at home with our parents.
>
> Father passed from earth to the Better Land on May 30, after being confined to his room and bed for three weeks, with urinary and bladder trouble, combined with heart failure, which had troubled him more or less for many years, although he could always attend to his bees, of which work he was very fond.
>
> A year ago in April mother died, since which time father's sickness became gradually worse, so that he often wished that death would but release him. He was up and around, and could look after his bees, until three weeks before his death, when he was taken sick.
>
> Father was born in Germany, and came to America in 1854. He married Angola Schocke, Nov. 13, 1856, and settled on their homestead in the spring of 1857, where they stayed until death called them home. Five children were born to them, three boys and two girls, all of whom survive.
>
> Father was a model bee-keeper, and had been in the business for many years. Yours respectfully,
>
> Miss Mary Theilmann.

We were sorry to learn of the death of Mr. Theilmann. We felt that we knew him quite well, as we met him a number of times when he came to Chicago. He was indeed a sturdy German, conscientious, and of high moral character. Our sympathy is extended to the bereaved children who are left to mourn the loss of faithful and devoted parents.

The following biographical sketch of Mr. Theilmann appeared in the American Bee Journal for Feb. 17, 1898, but it is just as interesting now as then, and shows what Mr. T. had done in bee-keeping as well as in other lines of usefulness:

> The subject of this sketch was born June 6, 1833, in Kieselbronn' near Pforzheim, in Baden, Germany. His ancestors escaped the massacre of what is called "The Cruel Bartoloma Night in France," and found safety across the river Rhine, in Baden.
>
> Mr. Theilmann attended common school from his 6th to his 14th year, besides one winter term in his 20th year, in a drawing school at Pforzheim; otherwise he stayed at home and helped his father to work his land until he came to America. He landed in New York in April, 1854, after a voyage of 42 days. He rambled for two years, going to Albany and Buffalo, N. Y.; Cleveland, Columbus, and Cincinnati, Ohio; Louisville, Ky.; Memphis, Tenn.: and to New Orleans, La., where he worked on a sugar plantation, got sick, and nearly died with yellow fever; when recovered he went to Shreveport, La., Pittsburg, Pa., then to St. Louis, Kansas City, and Council Bluffs, and back to St. Louis, Mo. In June, 1856, he started for Minnesota, and took up a government claim in Wabasha County, on which he still lives. During all his rambles he earned enough to make his living and pay his way, as he had given nearly all the money he brought with him from Germany to a distressed friend, when he landed at New York.
>
> In the fall of 1856 he was married in St. Louis, and took his wife to his new home in the wilderness, among the Sioux Indians, wolves and rattlesnakes, though they have never done any harm to them. A cat, that came to them, was the first domestic animal they possessed for many months. Speckled trout in the creek were plentiful, as the Indians would not eat them.
>
> The first year Mr. T. had to carry his provisions on his back from Wabasha (13 miles), making the round trip in a day, sometimes without his dinner.
>
> In 1857 he hired four yoke of oxen and a 24-inch breaking plow of some of his nearest neighbors three miles away, and broke up the first six acres of his claim in two days, *all alone*; and paid for the outfit with 17 days of 14 hours each, or 50 cents a day, mowing grass for hay by hand. The boys and young men of to-day would say, "I wouldn't do that;" but many of them would get along far better if they would.
>
> Mr. Theilmann kept on working and improving his claim, and after awhile bought a cow and a yoke of oxen. Boys and girls were born, until there were five in the family. They grew up rapidly, and soon helped their father and mother. The country settled up rapidly, a school district was formed, and school was held in a primitive log house first.
>
> In 1860 the Indians disappeared, just a little while before the New Ulm massacre, and never came back. In 1863, Mr. T. raised over 1100 bushels of wheat on 25 acres of land, of which 200 bushels were sold out of his granary for $500; he has also had wheat in succession for 17 years on a 16-acre piece, and never had less than 25 bushels per acre, and up to 45 bushels without the least fertilizing.
>
> In 1869 Mr. T. found a bee-tree in his woods, and took it home; from this and two more swarms he found he started his bee-keeping, transferred them to frame hives, Italianized and increased them to 74 colonies. In 1871 he lost all but 4 colonies, but by May, 1872, he hunted and found 15 colonies in trees and rocks in his vicinity; this gave him a start again. For nine years after this he tried all kinds of wintering methods without satisfaction, until in 1882 he built a bee-cellar all underground, which stood the test, and since then his losses have been very light in wintering, and they have averaged him an income of about $1000 a year.
>
> On Jan. 25, 1885, one of his bee-repositories, in which 87 colonies were wintering, burned down, but fortunately he had 100 colonies in two other bee-cellars. He started the season of 1885 with 90 colonies, which he increased to 170, and produced 6500 pounds of very fine honey, which sold for from 15 to 20 cents per pound.
>
> The season of 1889 was the best with him, 185 colonies, spring count, producing 25,000 pounds of comb honey. His honey crop and bees sold that year amounted to about $2500. The best from one colony and its increase he ever got in one season was five good swarms and 600 pounds of honey; this was in 1872.
>
> A car-load of the honey crop of 1896 was sent a Chicago commission man, who has tried to swindle him out of it for the past 18 months; it is still in court.
>
> The season of 1897 was almost a total failure, getting 1700 pounds of honey from over 200 colonies.
>
> In 1877 a railroad was built from Wabasha to Zumbrota, with a station on Mr. Theilmann's land. Mr. T. saw the opportunity, and laid out a village, calling it Theilmanton; it is now a village of about 100 inhabitants, with nearly all the conveniences farmers generally need, and it is quite a a big shipping point for grain and stock. Mr. T. also built a warehouse and grain elevator, which is the handiest and most substantial building on that line of the road. It works wholly automatically, without machinery of any kind, from the farmer's load to the cars. The grain can be weighed going in, also going out, without shoveling or other hand work except moving a light lever. Mr. Theilmann planned it himself, and prepared the drawings for it. The warehouse and the station agency were run by him for five years, when he sold it and went West on a trip to California and Oregon, and he got interested in medical lakes and healing mineral waters in Washington, 16 miles west of Spokane Falls; also in general mercantile at the Lake. He was the first bee-keeper that took two colonies of bees from Walla Walla across the Snake River as far north as Medical Lake. The bees were left in care of his oldest son, George; they did fairly well for five years, or until Mr. T. sold out there.
>
> In the meantime the farm and bee-culture were carried on at the old homestead, and Mr. Theilmann is satisfied and contented that he can not find a better place in the Union for his taste than what he has, especially after seeing Texas and some other Southern States three years ago.
>
> Mr. Theilmann's farm now consists of over 700 acres of land, some of it rather rough, but good pasture for his bees, cattle, swine, and fine-bred French Percheron horses; with substantial buildings for all of them, also a good house for himself, wife, and two children, a boy and a girl. Two sons and one daughter are married, and have homes of their own.
>
> Mr. Theilmann learned enough in the drawing school to make his own plans and drawings for many structures he has built on his own land, and otherwise, to almost perfection in handiness, work-saving, durability and comfort. He has also caused a nice little church to be built at Theilmanton, in which to worship and give thanks to the Giver of all good things for what we receive from his Fatherly hand.
>
> A Friend.

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we have used it ourselves.

Prices, prepaid—Sample copy free; 10 for 20 cts.; 25 for 40 cts.; 50 for 70 cts.; 100 for $1.25; 250 for $2.25; 500 for $4.00; 1000 for $7.50. Your business card printed free at the bottom of the front page, on all orders for 100 or more copies. Send all orders to the Bee Journal office.

Contributed Articles

Putting Foundation into Sections.

BY WM. MUTH-RASMUSSEN.

On page 313, "Ohio" asks how to put foundation in sections so that it will stay. Dr. Miller's answer does not seem, to me, quite to fill the bill. Perhaps I can help "Ohio" by giving my way of doing it.

I use full sheets and put them in with a Daisy foundation fastener, which is of the old style, where the front part extends about 3½ inches above the block, against which the foundation rests, and is shaped as an arch or half circle. (According to pictures in late catalogs, this arch top is cut away, down to the block.) I gouge a finger-hole (similar to the hand-hole in the end of a shipping-case) in the arched top, running from within ½ inch of the top of the arch and down to the block. The hole is one inch wide and ⅝ inch deep.

Now, as soon as the foundation drops from the hot steel plate to the wood of the section, I reach in through the finger-hole with the middle finger of the left hand, and bend the finger under the bottom (now upper part) of the section. Then, with the point of the thumb on the opposite (front) side I remove the section from the fastener, the foundation being firmly supported between the thumb and finger. While still holding the section in this position (upside down), I grasp the foundation with the thumb and middle finger of the right hand and give it a light pull towards the wood at two places, namely, opposite the ends of the insets in the section. This thickens the wax at the line of attachment, so that it spreads a little to both sides on the wood. As soon as this is done, I turn the section over and set it aside. It will not do to pull at the middle of the line of attachment, as this has a tendency to twist the foundation.

If the foundation does not melt quickly enough to suit me, as sometimes happens in cool weather, or when the foundation is damp (I make my own), I place the edge of the nail on the index finger of the left hand against the foundation and bear downward, so that the foundation will press on the hot plate with more than its own weight. This accelerates the melting.

Care must be taken that the foundation does not swing, while the attachment is still warm. Swinging stretches and thins, and therefore weakens, the attachment. A slight vibration of the loose (lower) end of the sheet does no harm, but there must positively be no motion where the foundation joins the wood.

I think this will make it secure enough to move on a wagon without break-down; but if it should not be found sufficient, let "Ohio" try the following in addition to the preceding: Just before putting the foundation on the hot plate, bend the foundation a little, so that the attachment will be on a curve instead of a straight line. If otherwise rightly done, this will effectually prevent the foundation from swinging, and nothing but a heavy jar will break it loose.

Inyo Co., Calif.

Formaldehyde Alone Not a Disinfectant.

BY J. E. JOHNSON.

On page 249, Mr. Hasty says that I am giving the readers of the American Bee Journal some well-ripened nonsense in advocating the use of oxygen as well as formaldehyde in killing germs and spores of foul brood. It would certainly be valuable information if Mr. Hasty would explain why. Also, how any gas affects the life of germs and spores.

All bacteria are vegetable, not animal, and do not live from compounds as do animals, and are not affected by any treatment as is animal life. These organisms are composed of protoplasm, paraplasm, etc., incased in a membrane of such resisting qualities that the life of the organism is safe from gas treatment. Oxygen of itself is a bactericide, and any germ is destroyed by oxygen alone if the cell-membrane is ruptured. Different acids have the power to rupture or eat through that cell, as it were, and for that reason they are bactericides. The gas of itself does not affect germs, because it can not penetrate the cell-membrane. Air itself is very penetrating, and would kill the life of the germ only for that membrane.

Formaldehyde is fully conceded to be the most effectual gas disinfectant known to medical science, that is, for all vegetable germs. But, why? I won't ask the readers to take my word for it alone, but Prof. George Newman, M. D., F. R. S., Demonstrator of Bacteriology in King's College, London, who is probably as good authority as can be found on this subject, says in his excellent work on bacteria, that whether formaldehyde is used in the form of formalin or paraform, it is effective because in the air it oxidizes into formic acid, hence it is effective. Other high authority corroborates this, but to get further evidence I wrote Prof. Hopkins, chief in chemistry in the Agricultural College at Urbana, Ill., and the following are his words in reply:

"Replying to your favor of April 6, I beg to say that oxygen is *absolutely* necessary to the changing of formaldehyde into formic acid."

He also says that experiments conducted by Prof. Burrill have shown that formaldehyde is not effective without moisture.

Now, if formic acid is the real cause of disinfection, and formaldehyde is only one of the elements consumed in forming this acid, is it not just as necessary to have the one element as the other? Not only so, but the oxygen can not possibly unite with any other element to produce any other product without expense to itself, so it certainly is just as necessary to have a constant incoming of fresh oxygen into a tank as it is to have a continual flow of gas.

Furthermore, formaldehyde gas is all gas, but air is only 1-5 oxygen, so the percent of oxygen in an air-tight tank would be small indeed. Now we know it is a hard matter to get any tank entirely air-tight, but if a tank is left open at the top, letting in gas at the bottom until gas comes out strong at the top, then closing air-tight, how much oxygen have you in the tank? Only 1-5 of the air in the tank being oxygen, and with a constant flow of gas in, or trying to get in, you would prevent more air from coming in. I say, and I'll stay by it until shown differently, that the principal reason people have not been successful in disinfecting hives and combs is simply because they have thought formaldehyde a disinfectant of itself, which it is not, and they have failed to let in the other agent—oxygen—in sufficient proportion to get best results.

I think that if cotton was soaked in formalin and placed in an empty hive-body, then three or four hive-bodies of infected combs placed above, then a cover placed on top so that all would be tight excepting little cracks between each body, it would be effective; but I want also to emphasize that combs must be *moist* and *warm*, and in order to penetrate into the wax or cocoon of wax or cell, give it *time*.

I talked with a very celebrated physician a few days ago, who has had many cases of smallpox, diphtheria and scarlet fever, and I asked him if he used formalin in disinfecting rooms. He answered, "Always." I asked how he used it. He preferred merely to saturate a sheet in formalin and hang in the room, and close the doors, etc., and not once has he failed to get good results. We well know that any dwelling-room will let in plenty of air, and yet thousands of such rooms are disinfected, and very seldom any failure.

Yes, it certainly is nonsense to say a tank must be air-tight in order to disinfect with any gas, as sulphurous gas—the second best disinfectant—is effective because it unites with the moisture of the air and produces sulphurous acid, and thus disinfects. The only reason that formalin may not be effective is because spores may be imbedded in wax. But when we take into consideration that both air and gas will penetrate very solid substances, if given time, I think it very probable that where any germ can live, both the gas and oxygen will reach them if given time.

If it is not presuming too much I want to make a few suggestions. I have given in former articles evidences that it is reasonable to expect that formaldehyde may be applied strong enough in a hive of live bees to kill germs of disease and not injure the bees. Let us take a reasonably strong colony of bees in the spring, but somewhat affected with foul brood. If a good honey-flow is at hand, and the weather is nice and warm, what is the result? In a few weeks the disease has almost disapeared of itself. In fact, many bee-keepers who have foul brood among their bees know that a pretty strong colony, although diseased to a considerable extent, will almost cure themselves of the *disease*, but the undeveloped *spores* are there, and the disease will reappear when conditions become more favorable to the growth of disease. Why is this? I think this is simply because the bees produce a *very much* greater amount of formic acid at this time.

Honey contains a certain amount of formic acid which gives it its keeping quality. Bee-sting poison contains formic acid, although the toxin is the element that gives pain and causes swelling. The acid causes the itching and irritation. Now, we know beyond a doubt that one of the products of the bees is formic acid. We also have good reason to believe that bees produce much more of this acid in a good honey-flow than they do when honey is not coming in. Whether the bee produces formic acid any other way, excepting by the way of the poison-sac, I do not know, but I think that during the process of evaporation the formic acid is conducted in the form of vapor, or rather minute particles, and is absorbed by the honey. Now, if at such a time they are able almost to cure the disease, why could we not enable them to make a complete cure by supplying them with mild fumes of formaldehyde, thus giving more acid and enabling an antiseptic to become a disinfectant?

Our great physicians have been able to acquire much knowledge of the human system, and still all they can do in case of sickness is to aid Nature to overcome the disease, and so it should be with bees. First, find out what power the bees themselves have in overcoming disease, then increase that power, if it be possible. We have within our system a means of fighting disease. The phagocytes of the blood, which are white cells, are so small that 50,000 would balance on a pin-head, and still when a minute drop of blood is placed on the slip of a compound microscope these phagocytes can be plainly seen to devour germs like a dog eating meat. If you prick your finger with a pin, in an instant many germs will try to enter the wound, but just as quickly thousands of phagocytes rush to the spot and not only destoy the germs, but wall them out. We call that wall "a scab" if it is large enough. If these scavengers of the human system would fail to do their proper work, then no medical skill could benefit us.

I want to say right here, that I heartily agree with Mr. A. C. Miller when he urges us to learn the nature of the bee; then we will be better able to give them proper care. Mr. Miller has met with criticism on every corner because he is so far ahead in his study of Nature. Many older bee-keepers would do well to ask him for information, instead of saying, "'Taint so."

Any new idea or bit of information, not generally known, must run the gauntlet, and usually is ridiculed and shoved aside, unless brought out by some well-known writers of long standing. We all have ample room for improvement, and often the rejected stone becomes the corner of the foundation, or at least finds a place where it comes in pretty handy. Knox Co., Ill.

Some Old Apiarian Ideas Changing.

BY ROBT. WEST.

EDITOR YORK:—Your generous administration of bee-knowledge, sometimes in double doses, has not, by me at least, been very gratefully responded to; for since I became able to be about again, so many things had to be attended to at once that I did not dare to "open the bottles," lest being attacted by "the smell of knowledge," I might spend my time drinking when I should be working. Everything in its proper time. Now the drouth has begun, the honey-flow seems over, and I am opening the wrappers of the "Old Reliable."

POLYGAMOUS NOTIONS OF QUEENS.

The polygamous notion of the queen is rather a startler to us queen-breeders. And why should she not, like other females, indulge more than once? Will this account for some queens giving fair progeny at one time, and inferior at another? Clipping her wing would prevent her going out after she began to lay.

What about such an unaccountable variety in drones? Who knows that the sperm in the spermatheca of the queen does not affect her whole system? We now have at this Station, at the head of one of our best working colonies, a golden queen whose drones we would like to use, but, like her workers, they are half black—every one. How does this come when she is well-bred and such a beauty?—only she fell in love with a negro!

It is beyond the present power of the microscopists, but will the physiologists gather up such phenomena, and, with fresh data, reason it out once more, and let us know the result?

CHANGING DRONE-CELLS INTO QUEEN-CELLS.

Yes, we, too, found a beautiful queen-cell built in the midst of drone-comb by attraction? So nice that we transferred it to a nucleus when sealed, chalking it so as to note results; but chalk did not stand Jamaica rain, and we lost track of it. Why should we quarrel with the bees if they want to turn a drone-cell into a queen-cell? Does not their queen often lay drone-eggs in worker-cells, and sometimes worker-eggs in drone-cells?

One of my neighbors says he used strips of drone-comb on the bottom of horizontal bars for his queens to lay eggs in for queen-cells. May be he does, but we do not believe all that is said in this country, for moral perception is not a noticeable feature of the inhabitants. Even one of the wholesale grocers assured me one day that Ananias and Sapphira were not Jews, but Jamaicans!

DO DRONES EVER GATHER NECTAR?

I see a question on page 212, to which I answer, Yes. Last summer, at this Station, I saw a drone sucking nectar from an unsealed comb in my hand. Lest I was mistaken, I called one of the students to look closely, and see if he was feeding. He exclaimed, "Yes, his tongue is right into the honey." Although an old man, I had to turn a somersault right before my class, to which I had been teaching that only the young workers had *all* the glands for secreting the digestive juices in proper working order; that even in the older workers some of them were shrunken, ill-shaped, discolored, and unfit for digestive duty. When this occurred these went out to gather stores, while their younger sisters fed the colony on semi-digested food.

Maeterlinck was a close observer, and he states in his book that the drones on returning from their daily flight help themselves to the choicest nectar in the cells. But even this, of course, has had some of the juices from the organs of the gatherer, and perhaps also the one that carried it to the storage-cell.

Do not be so surprised, for "knowledge is increasing." You are helping it onward. Many of the old ideas must go.

Hope Gardens Experiment Station, Jamaica, May 12.

Convention Proceedings

Report of the Onondaga Co., N. Y.) Convention.

(Continued from page 392.)

FIRST DAY—AFTERNOON SESSION.

The first feature of the afternoon session was the reception of new members. Then Mr. S. D. House, of Onondaga County, delivered the

PRESIDENT'S ANNUAL ADDRESS.

The subject of "organization," while it is a broad and seemingly easy question, I feel that I am incompetent to do anything like justice in discussing it. When we look around us we find organization everywhere, from the administration of our governmental affairs down to the smallest business concern; in fact, every well-regulated and successful business enterprise would fail without being properly organized for conducting its affairs. What would labor do in these times without organization in combating with organized capital?

Self-preservation is the first law of Nature; organization is the first adjunct to self-preservation. The great enterprises of to-day, that are so astounding in their magnitude, are but the results of the associated effort, that are destined to revolutionize the business operations of the world. Association and unity of action are the great mainsprings of power and progress. We have seen what wonderful results have been accomplished by associated action and combination of interest. We have seen what wonderful results have been accomplished by the associated diarymen; what organization has done for the farmers with their strongly organized granges; what it has accomplished for the fruit-grower, and what it is doing for almost every conceivable branch of industry.

But how about our own avocation, "Apiculture?" One of the best illustrations of co-operative effort is plainly shown in the economy of the hive. A single bee of itself is powerless to accomplish a very large amount of labor however industrious it may be. But when assisted by the vast throng of workers composing a colony, we well know the resuts of their united efforts, both in storing honey and in the defense of the hive.

We, as a fraternity of bee-keepers, can learn useful lessons from our bees. To them, not a few of us, look for the necessaries of life, procured by the sale of delicious honey, the result of the persistent labor of the thousands of tiny insects banded together in one common cause. If the instinct of the bee teaches it, that "In union there is strength," may not we who are endowed by an all-wise Creator, with reason to govern our actions, profit by the example set forth by the busy bees? It was an organization that placed upon our statue books the law prohibiting the adulteration of our products. It was organization that gave us the law protecting our apiaries from the spread of that dread disease, "foul brood." It was organization that kept Cuban honey from entering our markets free of duty. It was organization that gave us the privilege of sending queens through the mails. It was organization that defended several actions which have been carried to a court of record, and establishing facts which gave us a precedent to defend similar actions. It was organization that gave us a law prohibiting spraying fruit-trees when in bloom. In fact, organization is a protection to our industry. That famous old organization, the "Northeastern Bee-Keepers' Association," did us a good work, and it is for us to keep up the good work and place apiculture well up in the ranks among other pursuits.

There are several very important questions that require organized action, if we desire to obtain the best possible results for our labor. First among these is the all-important question of "Statistics." Many bee-keepers sell their products below market value because they have no knowledge of the amount of honey produced in the territory that usually supplies the market they are desirous of selling in. Neither do they know the amount that will be produced in the districts that supply the surrounding markets. Did they know that some sections would produce a large yield, or over-production, and other localities a small yield, or not enough to supply home markets, they could take advantage of the situation, and thereby not only prevent and avoid ruinous prices, but maintain nearly equal values, and a fair renumeration for our labor. This is not only applicable to our own State, but would be beneficial throughout the whole country.

By proper organization accurate statistics can be obtained and placed in the hands of every bee-keeper before, or by the time, his honey is ready to be marketed. And all of us will be benefited thereby. The manufacturer of cotton goods knows what amount of cotton will be produced long before the crop is picked and ready for market, and makes the price accordingly; the same may be said of wheat and corn. We all know what the crop will be before harvested, and the price is established correspondingly. Of course, these statistics are obtained and given out by the Commissioner of Agriculture. But without organization he would be unable to obtain that valuable information. Can you imagine the disastrous results to the wheat, corn and cotton grower without these facts?

Organization is essential in maintaining uniform packages, and uniformity in grading our products; and would be beneficial in many other ways, and keep us abreast of the times by an interchange of views.

As I have said, this subject is a broad one, but I hope I have said enough to provoke a thorough discussion of the question, which will not only result in action, but will bring out those members of the older and sister associations, whose wisdom and advice would be of great value.

S. D. House.

N. E. France—This matter of organization is one of the utmost importance. The motto, "United we stand," is what we must carry to the front.

Mr. France thought the membership rating extremely low. One dollar would make one a member of the County Association, the State Association, and the National Association. He said that New York was the banner State for membership in the National Association, until at the Los Angeles convention last year when California took its place; but it is coming to the front again. He thought that more ladies should attend the conventions, and that they should be made members of the local association free, collecting only 50 cents to pay their fees in the National. He spoke of legislation for bee-keepers; said that a great deal had been accomplished along this line. Ohio is now working hard for a foul brood law. In Wisconsin it seemed a hopeless case, but they now have an efficient law, and Inspector France has the disease so well quarantined that in the spring he can go and treat it all. Through being manager of the National Association has come to him the trials and troubles of individual members. Many seem to think they are insured, that no matter what trouble they get into, the Association must help them out. He gave instances in which he had compromised a settlement.

On the subject of adulterated honey, Mr. France said that in some States we only need to enforce the laws we have. As in the case of New York, the Wiley lie is being revived; "an experienced man" had been manufacturing comb honey for seven years. Mr. France had been able to hush him up in the public press, but he had had the first say, and the harm was done.

W. J. Morgan said he was a firm believer in organization.

W. F. Marks—Organization by counties gives a working force in each county. For example, while the foul brood law in New York was under discussion, a county secretary wrote to his member and secured his support, whereas a letter from the State Secretary to county members might not carry the idea of individual responsibility.

Mr. House—We can not maintain prices without thorough organization.

Mr. Marks—We would also gather crop reports.

Mr. France expressed the opinion that more personal good would be received in similar organizations because more bee-men would attend them. Having local organizations also facilitates equal distribution of honey, and helps control the small producers.

Mr. House regretted that local bee-men took so little interest in conventions.

Mr. France—This State has 22,000 bee-men, and yet there are only a few here, comparatively speaking.

A member asked Mr. France how to get rid of skunks in apiaries, whereat an interesting discussion followed. Mr. France related some lively experiences he had with the little fellows as a trapper and trapper's son. He considers them a benefit in the apiary, to get rid of black ants, unless Mr. Skunk becomes depraved and takes to eating bees, when off comes his head!

BEST RACE OF BEES.

"What is the best race of bees?"

Mr. Hutchinson—Italians are slow to go into the supers, and they cap honey more watery. Black bees cap white, but when the second crop of red clover comes the extra tongue-reach of the Italians gives them an advantage, and they will store honey when the blacks are getting nothing. The Carniolans breed up rapidly in spring, but they are no more gentle than the other races, and swarm much more.

Mr. Holtermann—This is a most important question, but hard to answer. There is as much differences in races of bees as in other stock. We are making progress in bee-keeping, and must look at the real value of bees.

Mr. Holtermann thought it would be a good idea to have bee-tests in the same way that dairy tests are held. Government experimentalists should test the powers of different breeds of bees, as to the weight of load they could carry, power of enduring cold, rate of flight, etc. The Carniolans are good, but they swarm too much.

Morley Pettit said that he had had some experience with Carniolans. They cap very white, and they swarm like flies. He prefers Italians with a dash of Carniolan blood.

Mr. House—A Carniolan drone mated with an Italian queen gives best results.

Mr. Holtermann had noticed Italians storing honey at the close of the season when the blacks were getting nothing.

Mr. West finds the swarming propensity of Carniolans great. He told of a place where he went to inspect bees. The man of the house was away, and he had to help hive 20 swarms that day. He left at 4 o'clock, and the bees were still swarming.

H. S. Ferry—Give them plenty of room, and they will not swarm.

The Carniolans had brought in more honey than any other for Mr. Ferry.

Mr. Holtermann considered it important to have several colonies of Carniolans in the yard to help build up weak colonies in the spring, because they rear brood so rapidly.

(Concluded next week.)

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Clipping Queens and Swarming Out.

My Dear Miss Wilson:—I must write and tell you how I think I almost ruined my apiary by clipping my queens. I have had such success with the few I have clipped in other years that I decided this spring to clip all I could find. And so one warm day during early fruit-bloom I did it. But I think I made one mistake. To make it doubly sure, I clipped *both* wings instead of one. I did not think of any harm coming from it, and I was especially careful to hold the queen gently as near the head as possible.

Since then I have discovered three of my queens hopping around the ground. Several others are missing from their hives, and one persists in swarming out. They act as if they are completely demoralized. I have heard that cutting off the antennæ will render a queen useless, but I never heard that depriving her of her wings would have that effect. Well, to say the least, I am surprised at the results of my clipping, and I think after this I will let the queens most severely alone. Illinois.

I don't believe that clipping your queens' wings was the cause of their swarming out. You would probably have had the same experience if they had had one wing left on, or if they had not been clipped at all. However, clipping the wings on one side is all that is necessary to make everything perfectly sure. Indeed, unless cut pretty short a queen can make a better attempt at flying with wings cut on both sides than with them cut on only one side. Just try it with a hen, and see if she will not fly better with both wings cut than she will if only one is cut. If one wing is entire she will flop over on her side if she attempts to fly.

The swarming out was either because your colonies were weak, or without food.

There has been a good deal of trouble with bees swarming out this spring, no doubt on account of the severe winter and spring.

One remedy is to put a queen-excluder under the hive and thus fasten the queen in until she makes up her mind to stay.

Bees Cause Matrimonial Troubles.

American Bee Journal.—

We are taking the liberty of sending you the enclosed which we received from Mr. W. D. Soper—one of our wholesale customers. He states in a letter that Mrs. Ward is an old customer of his.

We have not consulted Mr. Soper or Mrs. Ward about sending this to you, but think there can be no objection. As this is a little out of the ordinary line of bee-news, we thought it might possibly be of interest.

Very truly yours.
Lewis C. & A. G. Woodman.

The letter referred to in the above reads as follows:

Calhoun Co., Mich., May 16, 1904.

Mr. W. D. Soper.—

Dear Sir:—I wish you would come and get my bees, and everything belonging to them, right away, or at least write and tell me what you will do about them. If you can not give me anything for them, why, take them just the same. I will send stamp. Please write immediately.

Respectfully, Sarah S. Ward.

The local newspaper had the following account of this unfortunate affair:

BEE-WOMAN DID NOT DISPOSE OF STOCK, SO HER HUSBAND LEFT HER—LATTER HAD MADE A PROVISO THAT THE BEES MUST GO.

"May 17.—Mrs. Ward, the bee-woman, is again left alone, her husband having taken his departure unexpectedly, leaving his clothes and personal effects, for which he will return to-morrow.

"Mrs. Ward is respected and highly esteemed by her many friends and neighbors, who sympathize with her in her domestic troubles. She is a good woman, kind, gentle, and affectionate, and the only thing that has marred the happiness of her latest marriage has been several colonies of bees. Most of the bees died in the winter, and if they had all winter-killed Mr. Ward would not have had occasion to leave her roof. He said to the representative of this paper repeatedly that either the bees would have to go or he should take adieu of the apiary. Time has dragged along, and the season for bees to swarm is approaching, and the presence of the little buzzing honey-makers fairly haunted him. He saw his wife in the top of a tree sawing down a swarm of bees every time he closed his eyes. He never imagined himself engaged in any such occupation, for he wouldn't have stopped the bees if they had all started to leave, not even if they had taken the hives and bee-house along with them. He had honey three times a day and between meals, and yet he became impatient. Could the bees ever be sold? Could they be given away? Could they be killed? Either they must emigrate or it was his move, and he moved yesterday afternoon. He went to Eaton Rapids, or it is supposed he did. As to whether any of the bees stung him good-bye, it is thought perhaps they did. At any rate, his place at the table is vacant, and his granddaughter accompanied him. Their voices are no longer heard, and the only sound is the buzzing of bees.

"Mrs. Ward is a thrifty business woman, having made money from her bees. She is a neat and tidy house-keeper. She is a very agreeable woman, with a loving disposition. She consented to sell the bees; in fact, that was a condition upon which Mr. Ward promised to take her for better or for worse. The bee-market seems to be responsible for breaking up the home, as the bees didn't sell, and Mr. Ward lost confidence in futures. He got so he couldn't sleep. Something had to be done, and he concluded that it was "up to him" to act. He postponed that event for days, but yesterday afternoon he began to pack. His goods were nailed up in boxes and tied up in bundles, and when it was done he cast a look of infinite loathing toward the bee-hives, a glance of sadness toward Mrs. Ward, and taking his granddaughter by the hand, he walked away, accelerating his pace as the thought dawned upon him that he would never again live at an apiary.

"Poor Mrs. Ward, the bee-woman, was almost overcome with sadness, for life during the last few months had been a very happy one. She has reached an age when most old people are feeble, and she is not so spry as she used to be, but she faces the future with hope and courage."

Here is a sister that is in trouble on account of divided affections. It seems that when she was taken for better or worse the bees were not included, and the contract was that the bees must go. As she failed to keep her part of the contract, he evidently did not feel called upon to keep his. However, she seems anxious now to do her best, as she is willing even to give them away to get rid of them, for honey three times a day and between meals failed to reconcile him.

We may question her wisdom in making such a contract, but having made it she should surely keep it.

This is a warning to any of the sisters who may be contemplating matrimony, to look out for the contracts they make.

P.S.—A clipping received later shows that even if the husband is lost, all is not lost. The law will allow the deserted wife to have half her husband's pension, and the promise to sell her bees doesn't count in law, because not made under oath.

On the whole, this thing of marrying is sometimes rather troublesome, and any of you girls who have not yet made the fatal plunge, may do well to think it over carefully before taking on yourselves the care of a man. Unless you happen on one of just the right kind, he may be more troublesome to manage than a whole lot of bees.

"The Hum of the Bees in the Apple-Tree Bloom" is the name of the finest bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us *one new* yearly subscription to the American Bee Journal at $1.00.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Colony Killing Drones—Buckling in Foundation—Dead Bees Lying Around.

I have a colony that is killing off its drones, while the bees in other colonies let them remain, and are working hard. This colony has swarmed twice this season. It appeared to be half drones. Why do they kill them so soon?

2. What makes the bees fly from the hive as if they were angry, return, and then go out again? This colony does this every day or so; it is a strong colony.

3. Why do bees run about on the alighting-board with great haste, at about dusk? They do not fly, neither do they run after each other. Are they queenless?

4. Will "buckling" in super foundation make any trouble if running for extracted honey?

5. I find dead bees on the alighting-board every morning, and a lot of dead ones on the ground in front of the hive. I also notice bees in the weeds and grass all over the apiary. What can I do to remedy this? TEXAS.

ANSWERS.—1. When a colony has swarmed, and especially after its young queen has been fertilized, it has no further need of drones, and it is nothing strange they should be driven out. Your colony being weakened by swarming twice, would be sure to get rid of its drones.

2. The young bees are probably having a playing spell, flying with their heads toward the hives to mark the location.

3. It looks like queenlessness, but bees run about over the front of the hive a good deal when all right.

4. No great trouble, but of course the straighter the better.

5. Hard to tell a remedy without knowing the cause. Looks a little like a case of poisoning, in which case the only thing is to stop the poisoning—if you can.

Putting On Supers—Reversing Combs—Sticks Instead of Wires.

1. Turn to page 233, where "Missouri" asks if you would put on supers before the brood-chamber is filled; you there auswer his question by telling him, "No, not until the brood-chamber is filled and the honey harvest is nearly over." Do you mean that the brood-chamber is filled with brood, or with honey?

2. Now, turn to page 313, where "Wisconsin" tells you that he has cut out all the crooked and drone comb, and sees that all his combs are lacking one inch from the bottom-bar, and wishes to reverse the combs, and wants to know if it will hurt to have the honey down and the brood up, for three or four days. And you tell him that it will not. But, if he was to reverse the frames would the bees not build comb in the opposite way? If not, how would you reverse a hive containing Hoffman frames?

3. On page 330, Virginia asks: When you use sticks instead of wire, why do you make the sticks shorter than the depth of the frame? And you answer his question; but what I want to know is: How do you fasten the sticks in place, and what are their dimensions? LOUISIANA.

ANSWERS.—1. I am older now than when I wrote that answer, and I think I can give a shade better answer now. So long as there is plenty of room in the brood-chamber you need not expect the bees to do any storing in supers. When the brood-chamber is filled—and it makes no difference whether it is filled with brood or honey—then if they have anything to store they must store it in the super. But it is better to have supers on a little before they seem to be actually needed. If a super is not given until the bees are actually crowded for room in the brood-chamber, it may set them to thinking of swarming; and at any rate they must have a little time to get acquainted with the super before actually beginning work in it. They will begin work in the first super generally more prompt if a bait-section be in the super—a section containing comb at least partly drawn out.

2. Examine a brood-comb, and you will find that at the upper part, where the cells are quite deep for storing honey, they are built with a very decided dip, while the cells that are used for brood-rearing, and only 7-16 deep, have so little dip that if a piece of the comb were cut out you could hardly tell which was up or down. In actual experience I have found, as have many others, that the bees rear brood in these brood-cells all right when they are upside-down.

3. A full and satisfactory answer to this question can most easily be given by the following extract from the book, "Forty Years Among the Bees:"

GETTING COMBS BUILT DOWN TO BOTTOM-BARS.

While upon the subject of frames, I may as well tell how I manage to have them entirely filled with straight combs which are built out to the end-bars and clear down to the bottom-bars, a thing I experimented upon for a long time before reaching success. The foundation is cut so as to make a close fit in length, and the width is about half an inch more than the inside depth of the frame. The frame is all complete except that one of the two pieces of the bottom-bar is not yet nailed on. The frame is laid on a board of the usual kind, which fits inside the frame and stops on the edges so that when foundation is laid on the board it will lie centrally in the frame. The half of the bottom-bar that is nailed on lies on the under side. The foundation is put in place, and one edge is crowded into the saw-kerf in the top-bar. Then the lacking half of the bottom-bar is put in place, and a light nail at the middle is driven down through both parts. Then the frame is raised and the ends of the two halves of the bottom-bar are squeezed together so as to pinch the foundation, and nailed there. Then the usual wedge is wedged into the fine saw-kerf in the top-bar.

FOUNDATION SPLINTS.

Now we are ready for the important part. Little sticks or splints about 1-16 of an inch square, and about ¼ inch shorter than the inside depth of the frame, are thrown into a square shallow tin pan that contains hot beeswax. They will froth up because of the moisture frying out of them. When the frothing ceases, and the splints are saturated with wax, then they are ready for use. The frame of foundation is laid on the board as before; with a pair of plyers a splint is lifted out of the wax (kept just hot enough over a gasoline stove), and placed upon the foundation so that the splint shall be perpendicular when the frame is hung in the hive. As fast as the splint is laid in place, an assistant immediately presses it down into the foundation with the wetted edge of a board. About 1⅛ inches from each end-bar is placed a splint, and between these two splints three others at equal distances (Fig. 31). When these are built out they make beautiful combs, and the splints do not seem to be at all in the way. (Fig. 32).

A little experience will enable one to judge, when putting in the splints, how hot to keep the wax. If too hot there will be too light a coating of wax.

It must not be understood that the mere use of these splint will under any and all circumstances result in faultless combs built securely down to the bottom-bar. It seems to be the natural thing for bees to leave a free passage under the comb, no matter whether the thing that comes next below the comb be the floor-board of the hive or the bottom-bar of the frame. So if a frame be given when little storing is going on, the bees will deliberately dig away the foundation at the bottom; and even if it has been built down but the cells not very fully drawn out, they will do more or less at gnawing a passage. To make a success, the frames should be given at a time when work shall go on uninterruptedly until full-depth cells reach the bottom-bar.

Short Method of Transferring Bees.

In "A B C to Bee Culture," under "Heddon Short Method of Transferring," it says: "If the old queen in the newhive is a valuable one she should be caged when making the second drive." What does this mean? Should she be kept away from the bees for some time, or just while the bess are entering the hive and then run in at the entrance? Or should she be liberated in the top of the hive? IOWA.

ANSWER.—There is a possibility that the strange bees introduced may ball and injure the queen; so she should be caged, and left caged, in the hive perhaps a couple of days. There is still a possible danger that the bees finding their queen caged will take to the new queen introduced with the second drive; to make sure against that, kill or remove the new queen.

Drones and Mating of Queen.

I have a colony of bees in which the queen has died. I gave them a frame of eggs from another colony and they have a queen all ready to hatch. I caught four drones in one of my neighbor's hives and put them in with the queenless colony. They were young drones; there are no drones or brood in any of the hives.

1. Will these young drones be of any service to the young queen when she makes her trip?

2. When the queen is hatched, how long is it before she makes her trip? NEBRASKA.

ANSWERS.—1. They may; but they would have been just as likely to meet the young queen if you had left them where they were.

2. Five days or more.

Telling Age of Queens—Queen-Excluding Honey-Boards—Re-Queening—Uniting Weak Colonies, Etc.

1. How can I tell when a queen is one, two or three years old? I would like to requeen when they are two years old.

2. If I use queen-excluding honey-boards, when producing extracted honey, should the honey-boards be left on the year round, or taken off after the honey-flow? If taken off, at what time should they be put on again? My supers are left on the entire year.

3. If I buy Italian queens to replace old blacks or hybrids, how long must I wait after removing the old queen before putting in the new one by the cage they come in or by "drowning?"

4. When I examined my bees this spring, I found a great many of them with their brood and honey in the supers, while the combs in the lower story were empty. Why was this? and how can they be kept in the lower story unless I use excluders? I asked one bee-keeper about it and he said they had not been rightly prepared last fall.

5. A great many of my colonies do not seem to be as strong as

they should be, while a few of them are just boiling over with bees. Why is this? Do you think the weaker ones need requeening?

6. Would you advise me to take the queen from one of my strong Italian colonies during the honey-flow and introduce her to one of the weak colonies, and when the Italians have queen-cells sealed put them into the colonies that I wish to requeen in West cell-protectors? and can I put them in at the time I kill the old queens? I am running for extracted honey and want to keep bees for what money there is in the business.

7. In order to prevent after-swarms would you advise cutting out all queen-cells but one, or would you leave two or more?

8. The person who handled my bees last year divided some of the colonies after the honey-flow, and they came through the winter very weak, and had to be fed in the spring, and then I lost several by robbing. This year I want to unite weak colonies instead of divide. When would be the best time to do this? and about how weak do you think a colony should be to be a fit subject for uniting? Some of them had only bees enough to cover two frames last fall.

9. What is the best way to get a swarm of bees out of a tree?

10. How old were you when you began keeping bees? Do you think a man 41 years old too old to learn to handle them with profit?

CALIFORNIA.

ANSWERS.—1. I don't know of any way you can tell except by keeping a record. When you clip a queen, make an entry of the fact in the record of that colony. So long as you find a clipped queen in that colony, you can know that the same queen is there, and the record shows her age. If, at the spring overhauling, for example, in 1904, you find a queen with whole wings, you know that there was a supersedure the precious fall, and that a 1903 queen is before you, and if you want to supersede her at two years old you will wait till 1905. See "Forty Years Among the Bees," page 52.

2. The honey-boards may be taken off when the harvest is over; but if supers are left on there is no harm in leaving on honey-boards, too?

3. Opinions differ. Some think it better to put the queen in the hive (with a proper introducing cage) at the same time the old queen is removed, while others think it better to have the bees queenless two or three days. I don't know. When a flood of honey is coming in you can do almost any way.

4. If you allow the queen free range, she is pretty sure to lay sometimes in the upper story, and late in the fall may find more of the brood-nest in the super than in the lower story. Late in the season if you put all the brood in the lower story, you will be likely to find the the brood-nest there in the spring.

5. It isn't the fault of the queen. Sometimes a colony will be found greatly reduced while having a good queen. It isn't easy to tell in all cases just why one colony should be weak in spring and another strong.

6. The plan you outline will generally succeed; but your Italian queen will be safer if, instead of giving her to another colony, you take her with one or two frames of her own brood and bees and form a nucleus.

7. Did you ever try the removal plan to prevent after-swarming. When the prime swarm issues, place it on the old stand with the old colony close beside it. A week later remove the old colony to a new stand. In most localities that will put an end to all swarming. If it doesn't work satisfactorily with you, and you must depend on cutting out queen-cells, then cut out all but one. If you leave two, there is just as much chance for an after-swarm as if you left twenty.

8. You are very wise to decide that you don't care to winter a lot of weaklings. Unite any time after the harvest is over. Not later than September. Better have in each hive enough bees to cover at least five combs.

9. Chop down the tree and split it open. Have ready a good smoker when the tree falls.

10. I was 30 years, 3 weeks, and 3 days old when I got my first colony, or rather when my wife got it for me, for she caught a runaway swarm. At 41 there are very few things a man ought to be too old to learn, and bee-keeping is not one of the few.

"Shaken Swarms Without Shaking."

On page 426 (1903) what was the further development of "Iowa's" plan? Will it work after grubs appear in the queen-cells?

I have had good results by putting the new brood-chamber filled with foundation below, the old brood-chamber bees and queen over a Porter bee-escape board above all; then after one day's flight, so all the old bees were below, or later as the case might be, introduce the queen below. I tried this one a few times but it worked well as far as tried.

MAINE.

ANSWER.—I think "Iowa" did not report further. I tried the plan with one other colony; and while it might do for extracted honey it would not do for comb, for the bees carried down the black comb and capped the sections with it. Grubs in queen-cells would probably make no difference, unless trouble should be made by a young queen emerging. Your plan is probably better.

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FROM MANY FIELDS

Good Honey for Winter Stores.

All alive excepting part of the bees. The hives in some places were completely riddled excepting honey. Black honey or bottle-green honey, seems to give the bees cholera or dysentry. There are lots of very weak colonies, and some "playing out" every day, the weather being very cold and wet. Dandelions are out but the bees don't touch them yet. They are trying to work on fruit-bloom, but seem to get chilled and do not all get back. All the colonies that were relieved of the black stuff in the fall, and given good honey, are all right, and strong. I will try to keep doing that after this. E. H. STURTEVANT.

Washington Co., N. Y., May 20.

Poor Season in Arizona.

We have had a poor year. I got only 10 tons of extracted honey, lacking 2 cases, from 130 colonies, worked in two supers. My poorest colony, on scales, registered 14½ pounds; the best 30 to 35 pounds that day. Along comes a wind-storm with lots of sand; next day registered 4, 5, 6, 9. Another wind and sand-storm. I expected to get from 20 to 25 tons of honey. W. F. MCDONALD.

Yuma Co., Ariz., May 19.

Wonderful White Clover Crop.

I placed 55 colonies of bees in the cellar the latter part of November, and carried them out Feb. 6. They had a fine flight, and I put them back the same evening. I put them out again to stay the last days of March—53 living, and 2 died of starvation. The temperature of the cellar was 42 degrees, and occasional ventilation from the door.

The spring is slow and wet, not over half of the corn being planted in the country yet, but the bees are building up finely. Swarming has commenced slightly, but it is still

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raining. Apple-tree bloom has been gone a week or more, and black and red raspberry, and white clover, are just blooming, and if it will just quit raining now, you will probably hear of good results from this part of the world. I will feed my bees every cloudy day for the next ten. We have a wonderful crop of white clover—never have seen it better.

S. A. MATSON.
Nodaway Co., Mo., May 29.

Good Prospects for a Honey-Flow.

I like the "old reliable" American Bee Journal fine, and would not like to be without it. I have been trying to get the name of a new subscriber to send with my own, but it seems that all the bee-keepers in this part of Kansas know all they wish to know about bees. One bee-keeper who has about 50 colonies told me if I wished to succeed with bees to let bee-papers and bee-books alone. I differ from him, however, and shall try to prove the contrary.

I have 12 colonies, one being a swarm hived yesterday. With the exception of one all are in good condition. Five of the colonies I bought this spring at $3.00 per colony—my own choice of 16 colonies.

I commenced bee-keeping a year ago, buying 4 colonies at a sale for $2.00. Last year was a poor one in eastern Kansas—so much rain during white clover season, and basswood did not bloom at all. My 4 colonies did not swarm, but I caught 2 stray swarms.

The prospects are good at present for a good honey-flow. White clover is just beginning to bloom.

HENRY L. HAGER.
Doniphan Co., Kans., May 28.

Sycamore Maple.

Can you identify the enclosed leaf and flower (a species of maple, I think)? Is it of any value as a honey-plant.

J. H. WALTERHOUSE.
Ontario, Canada, May 24.

[The flower is from the sycamore maple. As all maples yield honey of good quality this species has some value. See Prof. Cook's "Bee-Keeper's Guide," page 403.—C. L. WALTON.]

The Season in Ontario.

Apple-bloom has opened a week late, owing to cold and wet which returned last week. At present the heat is likely to dry it up before its time.

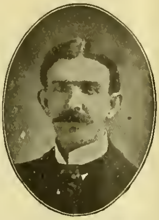
A trip towards Detroit, through Kent and Essex counties, showed clover badly killed, many fields being quite brown. Winter wheat is practically all gone in those counties. Here in Elgin County clover is injured, but by no means all killed. On light soil is where the loss is heaviest. Probably 70 percent of bees are dead throughout the Province, and the balance are in poor condition. The lateness of clover may give time for building up by stimulative feeding.

MORLEY PETTIT.
Ontario, Canada, May 25.

Home-Made Hives—Swarming.

I will describe how I make bee-hives. First, about 1858 or 1860, I got the right to make and use—not sell—the Langstroth hive. Then lumber was in the rough, and I had to saw and dress all of it myself. I could cut and dress every piece for a hive in one day. In the winter of 1902-03, I built a foot-power buzz-saw for $7.50, and with it can cut every piece for a hive; and at $35 per 1000 feet I made 14 hives, 8-frame, bottom 24x14 inches wide, 2 sides 20x13 inches deep, end-pieces 1½ inch plank 12 inches long and 12 deep. The ends are 12x12 which leaves an entrance 12 inches long and one inch deep at both ends, but the back is closed.

Now, take one end and 2 sides, nail them as they should be nailed. I have a board that fits in the hive so that the front end is in its place sure; I nail the body with a 12-penny nail, 4 in each end; this makes a solid body, no racking. I have a piece of hard wood ½ inch thick, 1 inch wide, with 8 holes to drive



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a nail 1½ inches apart. Take 16 lath-nails, cut off the heads, and drive one in each hole, so there will be 8 in each end; this completes the body of the hive.

The frames are 19-inch top-bar, 17-inch bottom-bar, and 11-inch end-bar. I have a board 19 inches long, 12 inches wide, with 4 strips 1¼ inches wide; put on each end of board half an inch apart the thickness of the end-bar, cut the two off half an inch below the edge of the top-board, cut a V notch in the end of two inside pieces, so the V edge of the frame will fit it. Put a thumb-button on the outside cross-piece. Now put the end in place, turn the button, turn up the board, nail the top-bar, turn and nail the bottom-bar. When finished, turn the buttons, placing the thumbs on each corner of frame. It should come out easy and true.

Now take the frame and saw a kerf in each end of the top-bar, then put the nail that is in the end of the hive up through the saw-kerf of the frame; each frame will keep in its proper place. I number each frame from 1 to 8, with a lead-pencil, having 1 and 9 on the edge of the hive, just inside of end-bar, so I can place every frame back in the hive as the comb was built; no crowding.

I depend for increase by natural swarming, and, what is necessary for success, have a stand to set the hive on with a good, smooth board in front, so that the bees can enter freely. I have a light quart tin-dipper, and small light poles for handles to fit in the end of the dipper handle. If a swarm settles high, put the dipper on the pole; if low so you can get to them without the pole, take the dipper and as soon as the bees begin to settle dip them off and dump them in front of the entrance of the hive. Many times I have changed their course from the bough to the hive before half the bees had settled. I do not recollect ever having to cut off limbs to get my bees into the hive.

My honey-board is made of 5½-inch boards, 13 inches long and 4 inches wide, with two strips ½ inch square and 20 inches long nailed on the ends of five boards; this makes a good honey-board leaving ¼ inch space between the boards. E. Tucker.

Genesee Co., N. Y., May 10.

Good Prospect for White Clover.

We winter our bees on the summer stands, and they came through the winter in excellent condition, with little loss.

The prospect for a white clover honey crop could not be any better. Max Zahner.

Johnson Co, Kans., May 18.

Plenty of Bloom.

We have had plenty of bloom the past four weeks in this locality, and the bees have been doing well ever since spring finally came. The loss in wintering was a little larger than usual. I have put on some supers of unfinished section, but the bees have not occupied them to any extent, so far. What we need is steady warm weather.

I think the American Bee Journal is getting better and more interesting every year.

Peter Westrum.

Hamilton Co., Iowa, May 20.

Heavy Fruit-Bloom—Introducing Queens.

There need not have been any winter loss of bees here, and was not, so far as I can hear. I did not lose any. The bees are working strong on a very heavy fruit-bloom, but they are not gaining in weight much; an average colony, on the scales, gains ½ pound in four days. The nights are too cool, but a very few days will see us in the harvest. Last year the bees worked the same way at this time (May 15), and May 17 they gained in weight 4 pounds; then the next week started on from 6 to 7 pounds, and May 28 gained 11 pounds—it was the banner day of the year. Those weights are net gain.

I think I have the best way of introducing queens, it has always worked with me, and I tried it on a colony the other day that had a virgin queen, and they did not harm her for four days, and then I removed the young queen. It is simply by taking out the escort bees and

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substituting bees from the hive she is to be introduced into. Now, I think the queen is as much to blame for her misfortunes as the bees, and if she goes out of the cage in a frightened way is generally killed; the escort bees are always killed with me. Who would not be frightened to see their daughters butchered before their eyes? Now, you will find that bees in a cage will not hurt her, as they are frightened themselves, and soon get used to feeding her.

Now. don't say you can't do it; just release the bees on a window and pick the queen up, start her head in the hole in the cage, and she will go in like a flash. Hold the thumb over the cage until you put a piece of wood in. Then go to the hive where you want to introduce her, take out a comb, and pick young bees up by their wings, put their heads in, and they will go in all right. Of course you will have to take out their queen 12 hours before introducing the new queen.

Linn Co., Mo., May 12. IRVINO LONG.

Cured Foul Brood with Gasoline.

Several years ago I had one extra-fine Italian colony that was badly affected with what had the appearance of being foul brood. I used extracting combs above, which were empty, and taking the combs out I sprayed them well with gasoline. It penetrated the combs until the wax was almost soft enough to fall to pieces. As soon as it had evaporated and they were dry, I put them in the lower part of the hive, putting brood above, also a queen-excluder above, and as soon as the brood was all hatched out I treated them the same way I had the combs. As soon as the brood appeared in the first combs I had treated I examined it and found no trace of diseased brood. Every colony that I treated in that way was cured. Before using the gasoline I had destroyed some colonies, but I never had to do so after I had discovered the effect of gasoline. W. A. FEE.

Spencer Co., Ind., May 16.

Report for 1903—Good Prospects.

I started in the spring with about 210 colonies, and increased to about 280, losing a few by starvation. I now have about 270, and may lose a few weak ones yet.

My honey crop was mostly white clover, and I took off about 20 tons, nearly half comb honey. The bees are doing finely, fruit-bloom is just opening, and our prospects for 1904 are very good for a big honey crop.

N. STAININGER.

Cedar Co., Iowa, May 6.

Outlook for a Fair Crop.

The outlook in this part of the country is good for a fair honey crop this season, and the bees here would rejoice in this if our market here would only quote better prices, for at the present cost of living and supplies there is not much to be cleared out of 7 to 10 cents for amber, and 10 to 12 cents a pound for better grades of comb honey.

It might be of interest to learn that in my time of bee-keeping, which is going on 9 years now, I never heard of the California Central Honey-Producers' Association outside of occasional mention in the American Bee Journal; and as we bee-keepers in this part of the State deem ourselves quite centrally located, we would be pleased to hear something more about it through the medium of the American Bee Journal. And, furthermore, we would be pleased to get acquainted with some other bee-keepers of this grand valley of the San Joaquin, by hearing from them through this department—"From Many Fields."

SEBASTIAN ISELIN.

San Joaquin Co., Calif., May 20.

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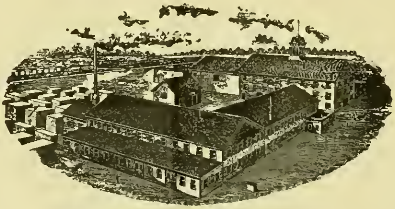

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A Little Message for To-Day's Life.

To know God and to do His will; to accept gratefully what He sends us, and to do faithfully what He bids us; to pray as we would talk with a friend; to trust where we can not understand, and to believe Him kind even in things that hurt; to keep unspotted from the world's sin and unselfish toward the world's needs; to love those whom we can not like, and to hate no one; to keep the gold of silence where we can not give the pearls of praise; to be true when others are false, brave in the midst of cowardice; and kind in return for injuries; to pity our enemies, enjoy our friends, and serve our Heavenly Father above by helping His earthly children below; in fact, to be like Christ in love and life—that is Christianity, and the ideal to which the Book of Books ever leads us.

Rev. Andrew Gillies, D. D.

Beedom Boiled Down

Sweet Clover Nectar Estimated at $10 an Acre.

Bees have done poorly for me this season on account of cold, wet weather in June, losing a few colonies by actual starvation before I was really aware of it; and if it had not been for a three-acre field of white sweet clover I should have lost more, as this patch kept about 50 hives in fair condition. In fact they went far ahead of the out-apiaries. I have sown this season five acres more, and next spring I intend to put out about 40 acres more, as I can rent land for that purpose at $1.50 per acre. I intend to put out mostly the yellow variety, as it comes at just the time when there is nothing else, and the blooming period is longer; but the three acres of white, I am satisfied, was worth to me this season $30, and I also have considerable seed from it.—R. L. Snodgrass, in Gleanings in Bee-Culture.

Cyprio-Carniolans.

I consider the introduction of Carniolan blood a benefit to Italians and would prefer such a cross to pure Italian blood, but my own experience and my knowledge of the qualities of these various races, leaves in my mind not the slightest doubt but that far better results can be obtained through using pure Cyprians on the female side, and pure Carniolans on the male side, for I am sure this cross gives, both theoretically and practically, the greatest combination of energy, hardiness, wing-power, tongue-reach and prolificness, that can be obtained from any of these races, and with these qualities a fair degree of gentleness is obtained through the Carniolan males.—Frank Benton, in the Rock Mountain Bee Journal.

Trapping Skunks in the Apiary.

I notice that some have had considerable loss from skunks. I found that they were eating a good many of our bees, keeping some of the colonies weak, although they were rearing plenty of brood. Poisoning is dangerous at best, so we commenced trapping. By nearly burying an egg in the ground a short distance from the apiary, and setting a steel trap over it, we caught six or seven in a short time. The trap, of course, should be set only at night.

Besides scratching on the hives the skunks would comb out the grass around the hive-entrances with their claws, to get the bees that came out of the hives, I suppose. The grass was so combed out in front of most of our 60 hives, before we began trapping. I find no signs of any depredations now, and the weak colonies have strengthened up considerably.—F. H. Harvey, in Gleanings in Bee-Culture.

Filling Honey-Cans Too Full.

Cans designed to hold extracted honey should never be filled quite full. When honey candies it expands; and if the receptacles be filled level full there is quite a liability of leakage, due to the cans bursting from the expansion of the honey when candying.—Gleanings in Bee-Culture.

CONVENTION NOTICE.

Texas.—The Texas State Bee-Keepers' Association will meet at College Station, Tex., Tuesday, Wednesday and Thursday, July 5, 6 and 7, 1904, beginning at 10 a.m. on Tuesday. This will be during the meeting of the Texas Farmers' Congress, so it will be a great time. Railroad rates and board will be cheap.

The convention will open at the time named. Come early and take part.

Louis H. Scholl, Sec.
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One Untested Queen.....$. 90
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DAVENPORT, - IOWA.
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HONEY AND BEESWAX
MARKET QUOTATIONS

Chicago, May 9.—The market has an oversupply of comb honey, very little of which will pass as No. 1 grade—price is 11@12c per pound, and off grades at a corresponding value. Extracted, 6@7c per pound for best grades of white; amber colors, 5@6c per pound. Beeswax, 30@32c. R. A. Burnett & Co.

Cincinnati, O., May 19.—The honey market continues to be dull; if anything, the prices on comb honey are lower; concessions are made on bigger lots. Fancy white comb honey, from 12½@14 cents. Sales on extracted are made at the following prices: Amber, in barrels, 5¼@5¾c; in cans, ½c more; alfalfa, water-white, 6@6½c; strictly white clover, for extra fancy, 7½@8c. Beeswax, 30c.
C. H. W. Weber.

Albany, N. Y., April 25.—Honey market is very dull. Stocks of both comb and extracted are lighter than we thought would be a month ago, when we thought we would have to carry over the season. The demand for honey here will be light until the new crop comes. Quotations are nominally—8@13c for comb, and 5@6c for extracted. H. R. Wright.

Cincinnati, April 18.—The honey market here is reassuming activity, and judging from present indications, and the lateness of the season, the last season's crop will be consumed before the arrival of the new. Amber extracted in barrels and cans, 5½@6½c; white clover, 6½@8 cents, according to quality and package. Fancy comb honey sells at 12@15c. Beeswax, 30 cents. The Fred W. Muth Co.

Boston, May 14.—The demand for honey is extremely light, almost nothing, and supplies are heavy for this time of the year, and our prices therefore are largely nominal. We quote fancy white at 15@16c; A No. 1, 14@15c; and No. 1, 14c, with no call for under grades. Extracted, from 6@7c. Blake, Scott & Lee.

Kansas City, April 18.—The demand for honey is a little better than it has been. Prices on strictly fancy comb are $2.50 per case, if not candied; the great trouble with the majority of honey coming from the West at present is that it is more or less candied, and about $2.00 to $2.25 is all we can get for it; amber is selling at $2.25 per case. Extracted is dull at 5@6c. Beeswax in good demand at 30c.
C. C. Clemons & Co.

New York, May 21.—The market on comb honey is decidedly dull and it is almost impossible to move large blocks. What little trade there is, is done in a small way. We quote nominally: Fancy white at 13c; No. 1 at 12c, and amber at 10c; no demand for dark at all. Extracted is in fair demand at unchanged prices, with a good supply. Beeswax remains firm at 30c, but we expect a decline very shortly.
Hildreth & Segelken.

Philadelphia, May 20.—The honey market has been quiet for the last 10 days, and very little doing. Some odd lots have been sold at very low prices to clean out. The demand during this spring-changeable weather has been very light. There is no fancy comb honey on the market. We quote: No. 1, 9@10c; amber, 8@9c. Fancy white extracted, 7@7½c; amber, 6½@7c. Beeswax has been received in large quantities; prices are a little off. We quote: Bright yellow, 30c; dark, 28@29c.

We are producers of honey and do not handle on commission. Wm. A. Selser.

San Francisco, May 25.—White comb, 1-lb. sections, 12½@13c; amber, 9@11c. Extracted, white, 5½@6c; light amber, 5@5¼c; amber, 3¾@4¼c; dark amber, 3¼@3¾c. Beeswax, good to choice, light, 28@30c; dark, 26@27½c.

There are no great quantities of honey on the market at present, neither is there much demand. For desirable qualities there is a tolerably firm tone to the market. The coming crop in this State will be light; there will be little or no honey produced this year south of Tehachapi.

HONEY AND BEESWAX
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PROF. A. J. COOK.

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Published by GEORGE W. YORK & CO., 334 Dearborn Street.

44th Year. CHICAGO, ILL., JUNE 16, 1904. No. 24.

No. 1.—Blossoms of Blue-Gum (Eucalyptus.)

No. 2.—Eucalyptus Forest near San Francisco.

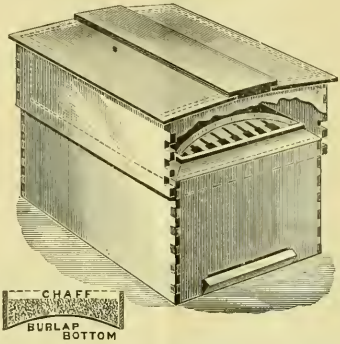
No. 3.—Wide-spreading Eucalyptus.

No. 4.—Group of Blue-Gums (Eucalyptus.)

(See page 422.)

SEEMS STRANGE

To talk about wintering now. But don't let last winter's losses occur again. Insure successful wintering by putting your new swarms into ROOT'S DOVETAILED CHAFF HIVES. ∴ ∴ ∴ ∴ ∴ ∴ ∴



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GEORGE W. YORK, Editor. CHICAGO, ILL., JUNE 16, 1904. Vol. XLIV—No. 24.

Editorial Comments

The National Association and a Honey Brand.

Editor Root suggests in Gleanings in Bee-Culture that the National Bee-Keepers' Association brand the honey produced by its members. Here is the gist of what he says:

> It would not be very expensive for the National to have a local inspector for each large city, and have him look over each large lot of honey, inspect the shipping and way bills, and look over the correspondence to make sure the honey was produced, put up, and shipped by some known responsible bee-keepers' society or individual member. I would assess the cost of this inspection of the honey on the producer or buyer of it, who desires to have the brand of purity and quality of the National affixed to it. I would also have the inspector appointed by the Board of Directors and the Executive Committee jointly, they to examine the recommendations as to his fitness that have been received, and to apportion out the salary, such salary to be in proportion to the amount of honey examined, and in the end to be paid by the honey-producer, the buyer, or commission man who desires the National to guarantee the quality and purity of the honey. If necessary, doubtful samples of extracted can be analyzed, and, if pure, the certificate or brand of purity attached. And, by the way, we already have a chemist on the Board of Directors, who is competent to make such analysis at a nominal price.
>
> This same inspector might also attach his official grading on the various shipments that come in, and thus avoid a lot of trouble between producer and buyer. To have some expert grade, as well as certify the purity of every lot of honey coming into Chicago, would be worth much.

Several years ago we suggested a plan something like this, but our idea was to have a National Honey Exchange located, say in Chicago, or some other large city, and all the honey that passed through its hands to bear its stamp or brand. There probably would be some danger in allowing each member of the National Bee-Keepers' Association to use its brand on his honey. It would likely be abused, and result in damage to all. Of course, if it can be safe-guarded in some way, it might be all right.

It is a pretty large subject to handle, and, as Editor Root well says, "Perhaps this idea is too utopian to be carried into effect." Still, it will do no harm to discuss it, for something practical may come of it, especially if a number of our best thinkers get to work on it.

But of one thing we feel fairly certain, and that is, there should be a national business organization, separate from the National Bee-Keepers' Association, to handle the honey end of the Association's work. The fact is, the existing National is not organized to do a financial business further than what it has already done. By this we mean, it is not intended to handle either honey or bee-supplies. It really has more to do now in its legitimate lines than it is able to pay for properly. The General Manager receives a mere pittance in comparison with the time he is called upon to devote to the Association's present work.

Progress of Apiculture in France.

In 1869, the late Mr. Chas. Dadant attempted to introduce to the bee-keeping public of France the American invention of Langstroth—the movable frame—and the improvements brought about by this invention in America. Their only bee-journal at that time, L'Apiculteur, derided the idea of any progress in movable-frame hives, and closed its columns against these things in a very peremptory manner, the editor ridiculing Mr. Dadant, calling him "American Barnum," and other derisive appellations, in reply to his insistence. The dispute became very acute, and finally ended by Mr. Dadant publishing his views in the Swiss Revue Internationale, edited by Mr. Bertrand, instead of the Franch magazine.

The years have rolled on, and the Dadant ideas have made their way, for the French bee-keepers took to the new methods to such an extent that last January, after 35 years of delay, L'Apiculteur, in the person of a younger editor, Mr. Sevalle, solicited the younger Dadant for contributions to the same magazine that had derided his father's views; and the May number of L'Apiculteur contains an article from the pen of Mr. C. P. Dadant, one of our esteemed contributors, in which he vindicates his father's memory on the subject that was the cause of the trouble.

America is on top once more. Truth and Progress will make their way in spite of all obstacles. It is the old story over again. Those who champion the cause of right and advancement finally wear the crown; and those who oppose them are soon buried in the oblivion which they deserve. The name of Dadant is an apiarian star that shines with a steady light on two hemispheres. May its luster never grow dim.

Double Permutation in "Shook" Swarming.

The variation of the method of making shaken swarms, given on page 428, under the caption of "Anticipated Swarming," may well be worth considering. It does not follow, however, that a method which succeeds with black bees in Europe would succeed equally in this country with bees largely Italian.

Mr. Getaz says of hive No. 2, "The absence of its queen during the eight days that the brood-nests were exchanged, has killed the swarming fever completely." According to the description, the queen has not been absent from the hive at all, but the removal of the colony to stand No. 3 has deprived it of its flying force, and that continued for eight days would certainly destroy all impulse to swarm. The queen, however, will continue laying without interruption, and when returned to stand No. 2 the colony will be as strong as ever. Is it not likely that in many cases it will then decide to swarm?

With regard to hive No. 1, after being placed on stand No. 3, Mr Getaz says it has no field-force, and has lost in bees, so it will not swarm. But it must not be forgotten that during the eight days that hive No. 2 has remained on stand No. 3 a considerable field-force has developed, and that field-force will enter hive No. 1 when that is placed upon stand No. 3. Will that not make the bees in hive No. 1, with a plurality of cells, think themselves strong enough to send out an after-swarm?

These criticisms are made not with the view of condemning what has been tried and approved elsewhere, only to suggest caution not to try the plan on this side the water on too large a scale at first. Will any who try it please report as to success?

Formaldehyde for Black-Broody Combs.

E. W. Alexander thinks the failure to disinfect combs affected by black brood is because of lack of thoroughness. After trying less thorough methods with unsatisfactory results, he adopted with satisfaction the following plan, which he gives in the Bee-Keepers' Review;

> "I finally used one of my large honey-tanks, such as I use to keep extracted honey in before I put it into barrels. These tanks are lined with the heaviest kind of tin, and hold over 4000 pounds of honey. I made a cover of matched lumber, and three sheets of tarred building paper, putting them together with paint. This was clamped down to the top of the tank by means of heavy rods, reaching down through timbers under the bottom of the tank. Racks were made to fit the inside of the tank, on which I could hang the combs of about 35 hives, and not have the combs touch one another. I made a ¾-inch hole in each end of the cover; one in which to insert the rubber hose which conveyed the gas into the tank, the other to let the air escape as the gas entered. Into my gas generator I then put two quarts of the best formalin that I could buy, setting it upon an oil-stove, and lighting the wicks. After it had boiled about half an hour the gas commenced to escape from the hole in the other end of the cover, and I then plugged up that hole and kept the lamps burning about five hours, or until all the formalin in the generator had been turned into gas. I then left it shut up air-tight until the next day, when I put in another quart and turned that into gas. I then left it four or five days, after which I opened the tank, but I had to leave it open a day or two before I could take the combs out, as the gas was so very strong. In this way I have, during the past summer, fumigated over a thousand of the worst combs that I could find in an apiary of nearly a thousand colonies; and, although some of them contained a little honey and brood, I have since seen no trace of the disease after putting bees on them."

But he has no faith in formaldehyde for foul brood—in which he differs from some others—and in fighting black brood he thinks it of first importance to have the best of Italian bees.

Overstocking—Positive (?) Knowledge About It.

H. C. Morehouse, in the Bee-Keepers' Review, after some sensible remarks about overstocking, says:

> "I believe that overstocking is possible—there must somewhere be a limit—but how many bee-keepers in the United States have *really* tested, in a scientific manner, the nectar-producing capacity of their fields? I venture to say the number is very few. I will give you a genuine instance of overstocking. Some three or four years ago there were kept within a radius of 1½ miles of Longmont, Colo., about 1500 colonies of bees. The yield dwindled to less than half that secured at the yards four or five miles away. More than half of these colonies have been moved to other locations, and the surplus yield in that vicinity now compares very favorably with the general average. But this was an *extreme case*."

Mr. Morehouse is quite safe, no doubt, in saying that very few have really tested in a scientific manner the nectar-producing capacity of their fields. He would run little risk in averring that no one has ever done it. A very pertinent question in the case is the question, "How can such a test be made?" Can Mr. Morehouse, or any one else, give a reliable answer to this question?

Mr. Morehouse doubts a case of overstocking cited by Mr. Lathrop, saying that the overstocking is not *proven*, and then gives, as above quoted, "a genuine instance of overstocking." But does he really *prove* the overstocking any more than does Mr. Lathrop? It is well known that seasons and conditions vary, even in Colorado; and can he prove that if during that three or four years only half the number of colonies had been present the yield per colony would have been greatly increased? Very likely the ground was overstocked; but how prove it?

Contributed Articles

Pickled Brood—Poisonous Honey, Etc.

BY PROF. A. J. COOK.

I AM getting many samples of dead brood, with inquiries what it is and as to the cure. I believe that these are what are generally known as "pickled brood." They are very different from foul brood, and its variety, black brood or foul brood, in another form. In these latter, the larva melts away into a mass of decay, a brown, coffee-colored, salvy, unctuous mass, that we can pull out of the cell with a tooth-pick or pin, and which usually flies back when it lets go its hold. In some cases it does not have the elasticity, and so does not spring back.

This other is very different. The bees keep their form, but as they are dead the bacteria take hold of them and they, as a result, decompose, or decay, as we say, and we smell the sour odor which gives the name. We never get the rank odor of foul brood.

Is not pickled brood a generic name for brood that may die from any cause, and then decay as a consequence of death? If this is correct, the bacteria kill the bees in case of the malignant foul brood, and in the other case—that of pickled brood—they simply remove the carcass of the bee, dead from some other cause? The one bacterium is our enemy, as it kills our bees; the other is a friend, as it removes the dead, and so cleans the hive. We have the same difference in the bacillus of diphtheria, and the more common microbe of decay or putrefaction. The one attacks and carries off our loved ones; the other will decompose our bodies and dissolve them, if we may so speak, or, perhaps better, resolve them into the several elements of which they are made up.

The first year after I came to California was a very dry year, with very little rainfall. There was much of this dead and decaying brood. I noted that many of the bees in colonies where it was most marked were very short of stores, indeed nearly in a starving condition. I commenced feeding them, and the disease at once disappeared. I seemed to cure it in every case where I fed the bees, and in colonies where there was plenty of stores the disease seems to be absent. I believe in this case it was simply a case of starvation, and the bees had not the food to enable them to feed the larvæ. We are now having in many sections of Southern California a condition similar to 1894—my first year here—and many bees are starving, and others are on the very verge of starvation. If the bee-keeper, in such case, will feed his bees, he will not only save them, but he will, I believe in many cases, remove this decaying brood.

I do not wish to say that starvation is the only cause of the brood dying. In case it die, then the removal will be the same in every case, and the condition and appearance will be nearly the same. Is it not possible that bees may, with limited stores, become discouraged, and not properly feed the brood, and so have the same effect? I have seen cases that looked as if this might be true. If the above be true, then pickled brood is the result of brood dead of any cause, except foul brood, and the remedy is to prevent conditions of lack of stores, cold, or aught else that will cause the death of the brood.

POISONOUS HONEY.

It will be remembered by the readers of the bee-papers that I have often expressed that the honey from the kalmia, or other reputed toxic flowers, was really poisonous. The fact that the reported cases of poisoning only occur occasionally, and that the flowers are always on hand, the fact that honey is often a poison to many people, whatever the source, and the fact that I have freely eaten of such honey with no evil results, has made me skeptical as to this poisonous nectar.

In California there is a similar belief regarding the nectar of some species of eucalyptus. It is reported to kill bees. Here, again, I have strong doubts. It is only occasionally that the mortality is noticed. I should look very carefully and see if I could not find other cause of the bees dying. We know that when bees are gathering very fast in the height of the season, very many die. They age very fast, and the mortality is very great. We often notice bees returning to the hives, especially near the close of the day, so tired and worn that they fall near the entrance of the hive and never gain it. I have wondered in case of these eucalyptus trees, if the bees might not die of overwork and old age in the same way?

We know that the temperature changes very rapidly here in California with the going down of the sun. It is not more than possible that the cool atmosphere chills the bees that are tempted to remain at work over-hours, and so the bees are chilled and fall from the flowers never to rise? Some of the eucalypts seem to attract the bees in great numbers, and to furnish much and excellent honey. In such cases it is easy to believe that the bees are lured on, late in the day, and age, weariness, and the chill of night, all together, were too much, and the bees simply died, possibly before their time. I really believe that such trees are to be praised, rather than comdemned.

I ask any who have opportunity to observe in this matter. I can not do so, as our eucalypts do not act that way. I believe that these trees are valuable for the bee-keeper, and I am inclined to the opinion that all are valuable. Mrs.

Minnie E. Sherman, of Fresno County, tells me she has observed just this thing in her eucalypts.

FATAL STINGING BY BEES.

We have record, during the past week, of two fatal accidents due from bee-stings—the one a horse, the other a child. The horse belonged to Mr. Mendleson, of Ventura County, and was hitched near the bees; the child is supposed to have disturbed and angered the bees with a stick.

This shows that we can not be too careful in all cases. Tying horses or cattle near the line of flight of bees, especially when the bees are idle, is always attended with risk. In case of severe stinging, wrapping cloths wet in hot soda-water, is the best ready remedy for a person; and covering a horse or cow with blankets wet with hot water, as hot as can be borne, or in case it can not be done at once, until the hot water is ready, in cold water is the best remedy. I have known that to save valuable horses that were seriously stung. Either hot or cold water will check the congestion.

Los Angeles Co., Calif.

Grading Honey—Winter Confinement, Etc.

BY G. M. DOOLITTLE.

A CORRESPONDENT writes me thus: "Mr. Doolittle, will you tell us through the columns of the American Bee Journal how you sort sections for casing when preparing your honey for market? A friend tells me you have a way different from others, and we'd like to know about it."

There are very few bee-keepers who do things exactly alike, and probably my way of sorting sections for casing will appear as unworthy of notice by most of the readers of the American Bee Journal, but as I have never refused to answer questions as requested, I will tell my way of assorting sections.

My honey is all stored in sections which are held in wide frames, four sections to each wide frame. The wide frames are clamped together by means of springs or wedges, so that there are five, seven, or eleven to the super, according to the number I think the colony will work in to the best advantage.

When the super is finished by the bees, and these wide frames are unclamped preparatory to casing the honey for market, the eye soon decides to which grade the honey belongs. In putting honey up for market I make three grades which I mark X, XX, and XXX, the three X being for fancy, the two X for No. 1, while the one X is for anything not good enough to go in either of the other two grades.

A sample wide frame of four sections is set on a shelf close by where the wide frames are unclamped, and they are always kept there as a sample for the eye to "work" from, so it takes only a glance at any wide frame of sections, or any section in one of these wide frames, to tell under which X it should go. My shipping-cases hold 20 sections; and as soon as I have five wide frames, or 20 single sections, I place the sections on a little tray, set the tray on the scraping-block, and the shipping-case close by, and then, as I scrape and clean the sections of propolis or any foreign substance, I set them in the shipping-case as soon as all is cleaned off nicely.

I had hardly thought this way of casing honey of enough importance to tell of it, still I know that it is by the use of the many, many little kinks, having them all massed together in the mind, that we become fully "fledged" bee-keepers. I much prefer the X's for rules in grading to anything else, for these can be put in the handholds of the case, out of sight from any one except as wanted for rapidly sorting the cases when they get mixed up in hauling to the railroad or otherwise.

QUEEN LAYING ON OUTSIDE OF COMBS.

Another correspondent wishes me to tell him in the American Bee Journal, why it is that the queen, in spreading her brood from the center of the brood-nest outward, in enlarging it, lays first on the side of a fresh comb furthest from the brood already in that nest. This is something that I have often noticed, and away back in the early seventies I noticed that at all times when the bees are enlarging their brood-nest rapidly, and when pollen is also coming in plentifully, the first eggs laid in any comb near the brood, but so far not containing brood, are laid in the cells of said comb on the side furthest from the brood, the queen going clear around the comb to near the center of the furthest side to lay the first eggs, instead of laying them in this new comb, right opposite the brood in the comb already occupied.

For a year or two I asked myself why this was the case, as our correspondent asks, and the only satisfactory answer that came was that the pollen has all to do with it; for when little pollen is coming in I have generally found the first eggs next the comb having brood already in it. When pollen comes in plentifully the bees pack it in the cells immediately surrounding the brood, and hence it comes about that, when the hard maple is in bloom in this locality, we have combs next the brood-nest solid, or very nearly so, on the side of the comb next the brood, on either side of the brood-nest, so that the queen can find no vacant cells to lay in; hence she is obliged to go clear around the comb to a point opposite the center of the brood in the comb adjoining, to lay, when the brood is on the increase. Immediately on her doing this, pollen is rushed into the cells of the next comb opposite the eggs she is laying; this, in turn, compels her to go to the opposite side of *this* comb to lay her eggs also, and thus it keeps on till the outside of the hive is reached.

Soon after she has filled the cells furthest from the brood with eggs, hundreds of larvæ are hatching in the comb opposite the cells which are filled with pollen, this causing the bees to remove the pollen for use in the manufacture of larval food, when the queen now fills these cells with eggs, though she often scatters eggs all through the pollen-mass, wherever she can find a vacant cell, before the general removal of pollen. From this cause we always find during the proficient brood-rearing in May and the first half of June, the first eggs and the first sealed brood on the outside of the combs, or on the sides furthest from the center of the brood-nest. In noticing this thing our correspondent shows that he is a close observer, for in speaking of it to some of our most prominent bee-keepers, I have been told that they had never thought of looking for anything of the kind.

OVER ONE-HALF YEAR OF CONFINEMENT.

Another correspondent writes that his bees were confined to the hive from November 10 to April 15, or for a period of over five months, and that as a result he has lost heavily. He wishes to know if any one ever had bees confined so long before.

I answer yes. But I do not think it possible that bees can be confined for that long, when wintered on the summer stands, and come out in perfect shape for the summer's work. My bees had no flight after October 30, 1903, till April 5, 1904, or during a period of five months and six days. Some appeared not to have suffered materially by this long confinement, at the time, but since then they have shown that this long holding of their excrement told on their vitality, and none of the 7 colonies wintered on the summer stands are at this date (May 17) what could be called good, perfect colonies, for all have dwindled, and three are dead. After April 5, we had more cold, and snow-storm after snow-storm followed, with high winds, clouds and cold, so that it was impossible, on account of the weather, to remove the bees from the cellar till May 2, when they were removed; those at the out-apiary on the forenoon of that day, and these at home in the afternoon. This gave a confinement of three days more than one-half year, and it is something worth recording, for, if my memory serves me rightly, such long confinement of bees has never been recorded before.

"Well, how did they come out?" I think I hear some one asking. At the out-apiary 3 were put in short of stores, they having only about 8 pounds of honey each, and these starved. I had expected to feed these, and so marked them, but the winter swooped down on us before I got to it, and I thought I would chance them rather than open up the hives to set in combs of honey with the mercury nearly down to zero. These 3, and 1 other away back in the eighties, are all the bees I ever lost by starvation, and I don't feel a bit good over the matter, for it is wicked, it seems to me, to allow anything that has served us faithfully, to starve. Three other colonies died of diarrhea, and the rest came out in good shape, or fully as good as an average.

Of those in the underground cellar here at home, all came out in fairly good shape except the united nuclei, used for queen-rearing, which were mostly composed of old bees. Of these united nuclei, about one-third died from the wasting of bees during the last two weeks in April, and the remainder are from fair colonies down to weak ones.

At the out-apiary I have nearly all kinds and varieties of bees, and I find that some of them stood this long confinement much better than did others. The golden Italians stand at the head, with the Root long-tongue next, and the Hutchinson superior stock as third. All the rest can be classed as fourth, which include queens from many noted breeders.

In testing the many queens I receive from others, I generally take them to the out-apiary, as I do not try to keep any certain strain there, and these, with queens of my own rearing from the home yard, constitute that apiary; and this past unprecedentedly long, severe trial of over six months of winter confinement has shed quite a ray of light on which bees would stand the test the best, as given above.

I must tell the readers of one particular colony of goldens. When we first went into the cellar at the out-apiary and took down the first hive, no sign of life was heard. The hive was set on the cellar-bottom and knocked upon; but no response. This was repeated three times when it was set aside as "dead." The next was taken, which was one of those that had starved. They were also pronounced "dead;" and my heart began to fail me for fear all were dead, as no precautions are taken here, only to set the hives in this cellar, with the entrances toward the wall to exclude the light a little, the family and farmer using the cellar just as they would were no bees in it all winter, I placing no restrictions on them.

But to cut the story short: After all were out, the farmer asked me if he should carry out the 7 hives of dead bees and pile them up where I wished them. I assented. All went well till he came to the seventh hive and last, (or what was the first one we touched in entering the cellar), when I heard an outcry. I went to see what the matter was, and found that the bees were just fairly boiling out of the hive he was bringing out of the cellar. The wet cloth used in removing them was hastily thrown over the hive and it was carried to its stand. And, strange to say, that "*dead*" colony was the nearest to a perfectly wintered colony of any I ever saw. No dead bees on the bottom-board, no spotting of things on their first flight, and no dwindling since, even after three days over half a year of confinement.

Mr. E. R. Root has told in the past of colonies which were so nearly dormant as to be lifeless, apparently, when in winter quarters; but this colony was the first thing of the kind I ever saw, and I do not know how to account for it, even now. Onondaga Co., N. Y.

No. 5.—CHERRY-TREES IN BLOSSOM—PAGODA HILL IN BACKGROUND.

The Eucalyptus—An Australian Honey-Tree Americanized.

BY W. A. PRYAL.

THE eucalyptus is an Australian tree, there being several hundred varieties. Many varieties have been introduced into California, where they thrive fully as well as in their native home. The year when the first eucalyptus (or gum-tree, as it is called in California) was introduced into that State is not well known as a matter of history, but it was fully 35 years or more ago. To-day forests of goodly size are to be found in many a valley and on many a hill in the Golden State. The variety most common in central and northern California, and, from what I have been able to observe in the southern portion of the State as well, is *Eucalyptus globulus*, or blue-gum.

This article will be confined to the tree just mentioned, and, in a general way, it will cover all that might be said of other varieties of eucalypti as well.

In California, the tree was set out largely about 25 years ago, and moderately ever since. The wood can be used for a great number of purposes. Up to the present its principle use here is for fuel; in the southern portion of the State it being a boon on this account, owing to the non-existence of native trees growing near the largely inhabited settlements. Its rapid growth makes it a valuable tree, besides, when once started into vigorous life, it is no easy matter to kill the tree. Cut it down as you may, it will at once send forth shoots from the stump, and in a few years perhaps two or three lusty trees will be growing where but one grew before. It is nothing uncommon to see a large crop of fire-wood or fence-rails harvested from a row of gum-trees. A farmer easily keeps himself and neighbors supplied with fuel from a row of these trees planted some 16 to 24 feet apart around his fences, roadsides, or along the bank of a creek. When near water, the tree grows in a two-fold ratio. It seems to absorb water like a sponge, and for this reason it has been called the "fever tree."

As the eucalyptus has to reach a respectable age before the wood is matured for uses in the building line and in the arts, it has not yet been voted a valuable tree for such purposes in California. But the time is coming when it will be so considered. It is a valued wood in Australia, so I have been informed. For a shade-tree it is invaluable. No farm is complete in California unless it has several gum-trees about the barn-yard, and, possibly, near the house, for shade. Though for shade near or in the garden, some other tree is preferred, preferably the fig, almond, English or California walnut, magnolia, locust, or the likes, as the tree under consideration exhausts the moisture from the soil to such a degree that no other plant can get a living for some rods near it.

The eucalyptus is the tree par excellence for the hills of California, of which there is an everlasting supply, and no mistake. It will grow on any hill, if it is looked after during the first year. I have observed that the tree is spreading of its own accord. Where the seed falls in suitable soil, it slowly nurses itself for the first year or so, and thence on it seems to spring skywards by metes and bounds, as it were.

It is as a honey-producing tree that the eucalyptus claims our attention at this writing. The bee-keeper prefers a tree that is useful to him in more ways than one. The locust is a great honey-producing tree, but as it is a rather slow-growing tree, he is not apt to plant it with a view of its helping the bees or enriching himself. But the eucalyptus covers the want as no other tree can. Its merits as a honey-secreting tree is well known to those who live near forests of the tree in this State. For a quarter of a century I have noted its value in this portion of California. It never fails of a crop of blossoms—and such yields of flowers are wonderful! I know of no plant that has a longer period of inflorescence than has the blue-gum. It often commences on one side of the tree toward the close of November, and around with the sun it gradually circles the tree. Thus, if it begins on the east side in November it may reach the south side by January, and toward May it will get to the north. The honey is pretty dark in the winter, but the color cuts no figure commercially with the bee-keeper, as it is not likely that any of it will ever be extracted, much less stored in sections. It was in 1877, I think, I referred to the color and quality of this honey, in the Bee-Keepers' Magazine. I have had no reason to change my opinion since.

The flowers of the different varieties (No. 1) are of all sizes, and of several colors, that of the *E. globulus* being of a creamy white, and for decorative purposes it is pretty; its slender stems, glossy bluish-green leaves, long, narrow and pendant, with little bunches of unopened flower-cups with the dainty warted caps, all covered with a delicate white bloom, and below flowers all a-bloom and radiating about a chalice that glistens with nectar. When a flower is ready to greet the sun, the little cap under which the hair-like petals were done up with the greatest tonsorial art, as it were, bursts and flies off. The latter literally covers the earth beneath the tree like gravel, and may be shoveled up under a big tree.

In further explanation of the pictures, I will say that the group of blue-gums shown in the circular picture (No. 4) are growing on our family homestead on the bank of the Temescal creek, near Oakland, Calif., and were planted by the writer's father in the neighborhood of a quarter of a century ago. The tall tree in the center is about four feet in diameter, and is probably 150 feet tall. Mixed in with the gum-trees on the right hand side of the cut is a clump of California laurels, or bay-trees. On the left are Monterey cypress; and on the hill in the distance is shown some trees of red-gums of a forest of mixed varieties of eucalypti. A pear-tree in bloom is shown in the foreground on the right.

Something like 25 years ago the hill hidden by the trees in the next picture (No. 2) was entirely nude of all plant-life except grass, and possibly some little wild flowers. It was formerly the property of my father. When purchased by J. Ross Browne, then lately United States Minister to China, he set the hill out in various kinds of trees, the great majority being eucalypti, erected several houses odd in architectural design, and called the place "Pagoda Hill." There are several nice homes in the forest; and oranges, lemons, foreign grapes, date-palms and other plants of a tropical and semi-tropical nature, grow in profusion at the several homes. The hill may be said to be a veritable bee-garden.

Picture No. 3 shows the wide-spreading trees that grow on a hillside in San Francisco, and illustrates how the tree will branch out every which way when the trunk or main tree has been cut off. Note how the fence was pushed out of place by the branches in their endeavor to make a place for themselves in the world. I saw one once that pushed a house off its foundation.

I now come to the orchard scene (No. 5). It is in front of where the marguerites commented on as aforesaid, grew. (See page 369.) The house is almost entirely hid by a row of Bartlett pear-trees. Note how the cherry-trees bloom! A cherry orchard in blossom in California is a sight well worth seeing. Such magnificent whiteness can hardly be imagined. This is one of our orchards. Blue-gum trees cover the hill in the background. There are several eucalyptus forests near our home.

Alameda Co., Calif.

Convention Proceedings

Report of the Onondaga Co., N. Y.) Convention.

(Continued from page 408.)

PRODUCING WHITEST COMB HONEY.

"How may I produce the whitest comb honey?"

Mr. Hutchinson—If you hive a swarm on the old stand and set the sections over on the new swarm you have them finished over new combs. It is a mistake to take honey off just as soon as it is sealed. If left with the bees a little while they seem to varnish it over in a way that makes the capping nearer air-tight, and the honey keeps better.

Mr. Pettit—There is a tendency towards taking off sections too soon for the sake of extra whiteness. If left with the bees a little it may lose some of the pearly whiteness, but the flavor is improved. Then, if possible, a drying day should be chosen for taking it off.

Mr. House—The store-room has a great deal to do with the nature of the honey.

Mr. West—There is a great deal of candied honey on the market of late years, and this injures the sale of all.

Mr. Holtermann—Storing sections in a cold place cracks the capping and allows moisture to enter. The cold also causes granulation.

Mr. Betsinger—Most comb-honey men use a larger hive than I. I have no honey in the brood-chamber. You have. This honey granulates through the winter, and one ounce of it carried up will cause granulation in the sections. Now with reference to watery cappings: Jarring will cause the whitest cappings to look soppy by shaking the honey down against them. Never use old sections that have had honey granulated in them. A comb that has had candied honey in once will cause the next year's honey to candy.

"How is it best to get bee-keepers interested to produce more comb honey?"

Mr. Betsinger added the word "*good*," saying that he knew a firm in Syracuse who wanted 100,000 pounds of *good* comb honey, but *none* second-grade

CARBON BI-SULPHIDE FOR FUMIGATING COMBS.

"How would you use carbon bi-sulphide to kill wax-worms in combs?"

Mr. Morgan—Use an ounce of the drug to 13 cubic feet of space in an air-tight box

Charles Mills explodes the carbon bi-sulphide in the box where the combs are placed. He sets fire to it with a match, and considers this a quicker evaporation than the ordinary..

Mr. West—We must be careful in using explosives.

Mr. Betsinger—This has an advantage over the old way of fumigating with sulphur. With it, crystals of sulphur were deposited over everything in the room, and any propolis was turned green.

ORGANIZING FOR HANDLING BEE-SUPPLIES.

"Will Mr. France suggest the best way to organize for handling supplies?"

Mr. France—A national association must benefit all its members, including the supply-dealers.

Mr. House—When an organization can offer the bee-men some financial gain, then we can win them to the organization, and not till then.

Mr. West—We have our own dealers, and are not all using standard goods. There are difficulties in the way of combined buying.

Mr. House—As to sections, the best selling standard in Syracuse is the 4¼x4¼.

Dr. C. L. Parker—We must do something; prices are going heavens high.

Mr, Holtermann said he was not interested in any supply business, but had had a great deal to do in that line, and while he thought prices were getting pretty high, still there were two sides to the question. A man with a buzz-saw can get out goods cheaply because he does not count his time worth anything.

Mr. Hutchinson spoke of extra expenses of large concerns, in the way of insurance, taxes, etc.

Mr. Hershiser wished to know why the improved methods of producing foundation had not cheapened its price.

Mr. Holtermann—There is a great deal in what Mr. Hutchinson says about extra expenses of a large concerns. Men going into a business do not count the cost. They sell goods cheaper than they can afford to, and soon fail in business. Other foolish ones take their place, and so it goes. Only the firms that charge a paying price succeed in the end. What an organization of bee-keepers can do is to order early in large quantities and secure a handsome discount.

Mr. France—It is profits we are all after. If the manufacturers can combine, they have the right to do so. The local organization must order as a unit.

ELECTION OF OFFICERS.

The election of officers resulted as follows: President, S. D. House; 1st vice-president, W. J. Morgan; 2d vice-president, W. H. Short; 3d vice-president, Howard Mills; secretary-treasurer, John H. Cunningham; moderator, Irvan Kenyon.

A vote of thanks was passed to Mr. Betsinger, the retiring moderator. Delegates elected to the New York State convention were Messrs. House and Morgan.

At the evening session Prof. C. B. Thain, of Syracuse University, spoke on

LOCATION.

We are in different and differing sections of country, and so must always consider location. He was trying to ascertain by experiment the effect of shelter in winter and shade in summer. It is remarkable, he said, how much difference there is in the honey-yield of locations only a few miles apart. We should study our location thoroughly to know when the various sources of honey begin to yield, etc. Doolittle says we want the hive full of bees only where there is honey to gather. The question of controlling is also a matter of location.

Mr. Hershiser—The difference in sweet clover honey yield is mostly in the atmospheric conditions. In poor seasons the bees mix in pollen, which gives the honey a greenish tinge. As to the yields of honey, much depends upon the man.

Mr. Betsinger—The time is coming when these big yields reported in the West and in Cuba will not be any more. Climatic conditions change.

Mr. Hershiser—It depends upon the weather.

Mr. Holtermann—The difference in a short distance is astonishing. Conditions which give a good growth of the plant give a good flow of honey. On the heavier soil you get a larger percentage of sugar in beets. Where the soil is failing, honey-production fails. Then there are weather conditions; clover requires moist, warm weather; basswood requires cooler weather. The loss of forests injures the honey-flow. There must be a solid subsoil, but the surface must not be too hard. The best is a clay loam with a subsoil which is not leachy. Buckwheat is very sensitive to moisture, and does better near a lake shore on a well-drained clay soil.

Mr. House—When the two crops are grown, all dark honey should be extracted from the brood-chamber before the white honey-flow begins.

NON-SWARMING.

Mr. Holtermann said that he would just like to introduce the subject, as he had not had sufficient notice to put his thoughts in proper shape. During certain portions of the season a great deal of time is spent in chasing swarms. Even if we want increase this is expensive, as we can get it much more cheaply by forming nuclei. In the prevention of swarming we must consider the man, the hive, the location, and the bees. In studying the bees we must study their tendency to hang together. Then we must have a large hive, plenty of ventilation, store-room and shade. With reference to location, Mr. Holtermann said that he had an almost continuous flow from early spring right on to the end of the season in September. Under such conditions it is much harder to prevent swarming than though there are breaks in the season. He does not like breaking down queen-cells unless the season is nearly over.

N. D. West prevents swarming by a method which, at the same time, requeens the apiary every year. This method is described in Mr. West's catalog, and need not be repeated here.

Mr. Betsinger—To get good comb honey, only put sections on those that are strong. A continuous season means swarming; a break means non-swarming. Let them lie still a couple of days. Put them in cold storage. To prevent travel-stain one must have new separators, and new combs in the brood-chamber.

THE MODERATOR'S REPORT.

Mr. Betsinger, the former moderator, told how he managed to regulate the price of honey. He would watch the whole season through to keep track of the amount of honey likely to be put upon the market, from his estimate of the retail price, and go personally to all the dealers, telling them what to charge for honey. They had learned to have confidence in him, and would take his advice. He considered that poor comb honey had injured the market considerably. Good white honey never goes begging.

POINTS FROM THE DISCUSSION.

Many favored the square section. One buyer, Mr. Cass, was willing to buy 100,000 pounds of comb honey if it is good, and in square sections.

Mr. Hershiser said the oblong section was the one put up by the late J. E. Hetherington, the greatest comb-honey producer in the United States.

Mr. France—The most important part of bee-keeping at present is the business end.

RESOLUTIONS.

The following were passed:

Resolved, That it's the sense of this convention that the apicultural interests of this State be properly represented at the Louisiana Purchase Exposition at St. Louis, and that the Commission of New York be requested to provide sufficient funds to meet the expenses of such an exhibit; and that it be collected, installed and maintained by a competent bee-keeper of this State. Also, that a committee be appointed to urge immediate action upon the part of said commission.

WHEREAS, The Secretary of Agriculture, in his last Annual Report to the President, strongly urged the transformation of the Division of Entomology of the United States Department of Agriculture into a Bureau, therefore be it

Resolved, That we, the Onondaga Co., N. Y., bee-keepers in convention assembled, approve of the recommendation of the Secretary of Agriculture, that the Division of Entomology be transformed into a Bureau.

Resolved, That we urge our representative, the Hon. M. E. Dristel, to vote and work for such a change, and that a copy of these resolutions be sent to him.

DR. PARKER,
IRVAN KENYON, } *Com.*
S. D. HOUSE,

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

A Poem for the Sisters.

I am sure the sisters will enjoy the following bright poem, about the 19-year-old sister with a "bee in her bonnet:"

PROFITS IN BEE-CULTURE.

I have a young friend who has studied the bees,
And can tell all about them with marvelous ease;
She talks of the workers, the drones and the queens,
And you can't say of her that she "doesn't know beans"—
For she does, and whatever this girl hears or sees
Sets her tongue running fast on the subject of bees.

"There's a bee in her bonnet," I know by the sound,
For there's plenty of buzzing when she is around,
And she'll wax very eloquent, telling how money
Will roll in as soon as she markets her honey.
I really believe she will meet with success;
And that I'd like to help her I'm free to confess.

A worker herself, she is bound to succeed
In the culture of bees, and 'twere folly indeed
To try to induce her to give up the scheme,
For she says, "I'm persuaded that this is no dream."
So she hums to herself (she is only nineteen),
And holds fast to her plan with the grace of a queen.

I wish she would notice that I'm not a drone,
And pity me, knowing that I live alone!
I will play "busy bee," keeping ever in sight
This sweet apiarist in whom I delight.
I'll buy her a comb, and then after a spell
I'll arrange for her comfort a right royal cell.

Perhaps if a bad bee should sting her some day,
She would fly to my arms for protection, and stay.
If she doesn't, I'll wait till the swarming-time comes,
When folks run about beating tin pans and drums,
And then I'll be certain to capture this queen,
To reign over my hive and make all things serene.

Hartford Co., Conn. CHAS. EDWARD PRIOR.

Plan for Prevention of Swarming.

DEAR MISS WILSON:—I *think* I have studied out a plan to prevent swarming when one wants honey and not increase, and if the bees are preparing to supersede it will not interfere with that. I have neither read nor heard of this plan, although it is similar to the "shook" swarm. I will try it soon, and if others should do so I would like to have them report.

When queen-cells are started divide the colony by removing two or three frames of the youngest brood, also the queen-cell and adhering bees. Place these and the queen in a new hive on a new stand, add three dummies, and fill the remaining space of the brood-chamber with frames of empty comb or full sheets of foundation, and place a super with sections on top. No queen-cell should be left in the old hive.

Now, a day or two after, or as soon as the brood in the old hive is all capped, place this chamber on top of the new hive with a bee-escape between it and the super. After the bees are all out of the upper chamber, it and the escape may be removed. It is always well to have a few bait-sections in the super.

With me this is only theory at present. What do you think of it? What suggestions do you offer, especially about the arrangement of the new brood-chamber?

Tell the sisters that the Porter bee-escape is *one* of the best things to have about the apiary. AUNTIE BEE.

Northwest Kansas, May 24.

A serious objection to your plan is that when you move the colony to a new location there is no understanding on the part of the field-bees that any change has been made, and for the next two or three days, when they return from the fields with their loads of nectar, instead of going to the hive where you want them, they will go straight to the old stand where they have been accustomed to go. So although you may prevent swarming you will also prevent all storing in supers until a new force of gatherers comes on the field.

There are other objections, but this one is enough.

The Wife of the Bee-Keeping Brother.

A word needs to be said not exactly to the bee-keeping sister so much as to the wife of the bee-keeping brother. You are very much interested, no doubt, in your husband's work. You are anxious that he shall make a success of bee-keeping. You are quite willing to help him with the extracting, or with taking care of the wax, etc., but to go into the apiary and do the actual handling of the bees, that's a different matter. If you knew what a stimulus it would be to your husband thus to have your co-operation in his work, to have some one that was thoroughly interested—some one that he could intelligently talk things over with—you would probably make a desperate effort to overcome all obstacles that stand in the way. Remember the proverb: "Sharing joys doubles them; sharing sorrows halves them."

If the wife is familiar with the work of the apiary, she is able to take her husband's place in case of emergency caused by accident, sickness, etc. And you may not realize what a blessing it is that you are able to do it until the need for it comes. It is not easy to get a suitable person to take charge of an apiary on short notice, if, indeed, it is at all possible, and if you can take charge of the apiary yourself you are independent.

Often in case of the husband's death the wife has been compelled to dispose of her bees for a mere song, because she did not know anything about them—could not tell the least thing about them, whether the colonies were weak or strong, or what they ought to be sold for.

A lady came to me this spring saying that she had had 23 colonies of bees left on her hands, and she did not know the least thing about them. She wanted to sell them, and she had no idea whether to ask 50 cents a colony for them or $10. They were in the cellar, and she did not know whether they were dead or alive, whether they were Italians or hybrids, or how to go to work to get rid of them.

Now, suppose the wife left in a similar position knows how to care for bees, instead of selling she might make quite a competency from them, or if she prefers to sell she could at least care for them until she could sell to advantage, and not be obliged to hustle them off for what she could get for them.

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we have used it ourselves.

PRICES, prepaid—Sample copy free; 10 for 20 cts.; 25 for 40 cts.; 50 for 70 cts.; 100 for $1.25; 250 for $2.25; 500 for $4.00; 1000 for $7.50. Your business card printed free at the bottom of the front page, on all orders for 100 or more copies. Send all orders to the Bee Journal office

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

M'EVOY'S BEAUTIFUL APIARY.

Say, that's a beautiful apiary of McEvoy's on the front of April 28! But to accord with the ancient saw about the shoemaker's wife and the blacksmith's mare, there ought to be lots of foul brood in it.

JOBLOTS OF HONEY.

Yes, a man will manage to think he is sending a fine lot of honey when it is higglety-pigglety to the last degree, and some of it candied in the comb. I can make a worse confession for myself. Once on a time I thought I was sending to town a fine lot of honey. It was in milk-pans—combs cut from box-hive brood-chambers. Two-thirds of the cells had pollen in the bottom and honey on top. The grocer who took it also thought it a fine lot of honey. And he seemed to incline to think with me, that the customers were unreasonable when they "kicked" on it. They were so squeamish as to remark that they didn't like so much "gum." Page 307.

LONG WINTER CONFINEMENT OF BEES.

John H. Clasen, page 315, furnishes what we can use as the "record" on long time without a flight—that is, we can use it until the next fellow "breaks the record." Three consecutive years. Number of colonies, 10, 18 and 18. Days without a flight 117, 122 and 102. One colony in no condition to winter; others all did well, except that two perished during the extreme 122 days of confinement.

CHUNK HONEY FROM A HOUSE-SIDE.

Quite a lot of chunk honey to capture at one time is the 302½ pounds which H. Gilbert took from the walls of his house. Almost a pity that so great an establishment must be broken up. Hardly practical, I suppose, to extract the honey by whirling house and all. Page 324.

THAT ST. LOUIS APIARIAN APPOINTMENT.

So the management at St. Louis think that Apiculture is something to be given away as a mere bonbon to whomever it seems nice to make a place for. Ask 'em whether they expect Mining and Medicine and Newspaperdom and Electricity to stand that sort of thing—superintendence by persons almost totally unknown to the craft. Apparently boodle was not the only evil thing with which the air of St. Louis got tainted. Page 324.

APIARIAN NEGLECT SOMETIMES MORE PROFITABLE.

So E. D. Townsend wonders what he has been at these years to put so much work on so few bees. Recently with four visits a year he has run an apiary 50 miles distant and averaged 600 dollars a year in extracted honey. This is a kind of evidence not easy to argue against. What if a lot of swarms do go to the woods? What if some inevitably neglected things do cost honey and money? What if somebody's steady work in spring could give things quite a boost? The footing up, and the "lump in a fellow's side" at Christmastide, bid us to forget all that. We have been in the way of thinking (at least teaching) that bees don't bear neglect worth a cent. Plainly that's not the only thing to be said. Sometimes bees do bear lots of neglect, and bear it well. I can contribute another note to the same chord. My one big apiary of bees right at home bears great and frequent neglect, not for profit's sake, but to humor an invalid's chronic worthlessness. They bear it well, and bring me in some returns every year as they did aforetime. (In 24 years I haven't met a year without some surplus.) Page 326.

PRIORITY RIGHT IN BEE-LOCATIONS.

I'm going to stand right square by my guns where L. V. Ricketts trains his battery on me about location-crowders. I most freely grant him that there are many complications—some of which make things tolerable which at first view seemed to be wrong. I can tell him once more (if it will do any good) that nobody proposes to prevent landowners from keeping a few bees if they want to—or to call them names for doing so. Also, no amount of bees commensurate with pasture owned is to be complained of. And we know the law doesn't cover the case—world abounds with legal opportunities to do wickedness. But all this is not much better than dust to hide the real issue. Here's the point:

Some are actually and assuredly doing (and some others are arguing that direction because they lust to do) a plain and villainous wrong to brethren who are specialists like themselves—overlapping their occupied territory. Usually the harm they do to themselves is greater than the harm which they inflict—but that doesn't help their moral standing any, nor lessen the wrong. Usually they could have gotten into a clear field with a little effort—but whether they could or couldn't does not signify. The relevant thing is that they spy an honest man with something valuable in his possession which the written law does not cover. Thereupon they proceed to seize a part of it. Years of occupation and painstaking care they propose to ignore.

Now it isn't by calling things by their right names that Mr. Hasty will disgrace his department and himself. He *would* disgrace these if he called a scamp a so-so and tolerably fair sort of a fellow—if he called the Ishmaelite a worthy comrade—if he called the hog "our admirably thrifty and diligent sod-turning brother." Page 327.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Putting On Supers—Old Queen with First Swarm.

One year ago this spring my father bought 2 colonies of bees in box-hives. I took care of them the best I knew how, increased to 5 colonies by natural swarming, and I bought 5 more colonies early in the winter. I wintered the 10 colonies in a low shed that faced the east. One colony died, leaving 35 pounds of honey. This colony was in a big box-hive. I sold 1 colony, in a box-hive, early this spring, leaving me 8 colonies.

One of my colonies sent out a swarm the other day which I hived, and it is doing finely. In looking in the hive, from which the swarm issued, I found capped honey, and so I put on a super, but the bees do not seem to be working in it.

1. Did I put the super on too early?

2. When should I put on supers? Sweet clover is in bloom here about the first of July.

3. In natural swarming does the old or young queen, or queens, go with the swarm? KANSAS.

ANSWERS.—1. As the swarm had just left the hive, the mother colony was so reduced in strength that you ought not to expect it to do anything in a super. Even if a colony is already storing rapidly in a super, when it sends out a swarm you will find work in the super brought to a stand-still until the colony has time to recuperate.

2. The old rule was to put on supers when you find bits of white wax on top-bar or the upper part of comb. A little earlier than that might be better—say as soon as you find in full bloom the plants from which the bees are to store a surplus. Perhaps white clover is that plant in your locality.

3. The old queen goes with the first swarm; young, or virgin queens, with after-swarms.

Drone-Laying Queen—V-Shaped Hive—Bees Killed on Telephone Wires.

1. About April 10 I found one of my colonies, which last summer was unusually prosperous, quite weak. It had, April 10, a splendid-looking queen (I saw her), but there was nothing but drone-brood in the hive—plenty of that. Why was it?

2. May 2, desiring to replace an old queen with a new one, but not wishing to kill the old one, I put her into an empty hive with a comb of brood and about a quart of bees. I shut them in securely, but with an opening the full width of an 8-frame hive. I kept the bees there, shut in, for exactly 100 hours—releasing them after dark. Two days after releasing I opened the hive and found all of the bees gone excepting about 50 dead ones. I could not find the queen, although she had laid a large number of eggs in three combs, two of the combs new ones. Did the bees return to the parent colony (10 feet away)? Is it probable that the queen went with them back to the parent hive? This queen had never had a flight in my yard, as she came from the South.

3. There used to live at Mattoon, Ill., 26 or 28 years ago, a man by the name of Barber, who invented, sold and used a hive with a V-shaped frame. Is he still living? and is the hive in use anywhere? Was it a success?

4. My home is in a town of about 30,000 inhabitants, pretty closely built. A good many telephone wires run along the street, and hundreds of bees kill themselves by striking the wires. I lose a good many queens in that way, also, I think. Does any one else have the same experience? PENNSYLVANIA.

ANSWERS.—1. You had a drone-laying queen. If, by any means, a queen does not become fertilized before laying, all the eggs she ever lays will produce only drones. Many queens, when they become old, put occasional drone-eggs into worker-cells, and occasionally an old queen, having exhausted the contents of the spermatheca, lays only drone-eggs. In either case, the queen is the same in appearance as if she laid worker-eggs only.

2. It is only too common a thing for weaklings to desert their hives in spring, especially when there is so much bad weather as during the present year. The bees may have returned to the old hive, or they may have entered some other hive. The acquaintance, or lack of acquaintance, with surroundings on the part of the queen would cut no figure in the case. She follows rather than leads.

3. Years ago a hive with triangular frame was somewhat extensively advertised, but I think some other name than Barber was connected with it. The fact that nothing has been said about it in the bee-papers for many years would seem to indicate that it never went into extensive use.

4. I don't remember to have seen a loss of that kind mentioned, and am wondering whether your loss is as great as you suppose. Who else has any experience in that line?

Bee-Feeders—Patents Among Bee-Keepers.

A farmer here who has long been interested in bee-culture and has also been a mechanic while in town, has invented a bee-feeder which is claimed by him and one or two others who have tested it, to be far superior to any other known bee-feeder. He claims for it the following good qualities:

The bees can be fed at any time, as often as required, without the loss of any heat, with liquid or candy; the candy fed in cold weather can be reached by the bees directly from the cluster. The bees are not disturbed in the least by work on the feeder.

The feeder is proof against robbing. For wintering bees, if it is left on the hive with chaff around, and a bee-way in the center left open to feed, the feeder will absorb all moisture and leave the bees entirely dry. The feeder can be examined at any time as to the quantity therein without loss of heat or disturbing the bees. Bees can pass over the combs everywhere.

He desires to have the feeder patented, and takes the liberty to ask advice on the following points:

1. Is there a sufficient demand for factory-made feeders to warrant the expense of placing them on the market?

2. How much will bee-keepers pay for a good feeder?

3. Are bee-keepers prejudiced against patented articles?

He thinks bee-keepers as a class are of the opinion that all discoveries made in their fields should be *given* to the public, and that they will therefore not patronize sellers of patented articles. He is probably mistaken in this. IOWA.

ANSWERS. 1. Not unless they are superior to anything already on the market; which may not be in the present case, for the advantages claimed are also claimed for feeders already in use.

2. Some feeders are sold as high as 25 cents each.

3. While very few things of merit used by bee-keepers are patented, the fact that an article is patented hardly bars it out if it is really worthy.

Number of Colonies for Family of Two—Demand for Honey and Beeswax.

1. Considering that $1.00 per day is the lowest a family of two could live on, how many colonies, if properly handled, would, in the average season, produce the said amount per year?

2. Is there always a demand for honey and beeswax? NEW YORK.

ANSWERS.—1. I don't know. What would be true in one place would not be true in another. At a rough guess, if your location is about an average one, you might make it with 125 colonies. But don't think of depending upon bees for a living until you have enough ahead to tide you over two or three years of failure if they should happen to come in succession.

2. There is always a brisk demand for beeswax, and usually good sale for honey, but sometimes the honey market is very dull.

Forced Swarming—Paraffin-Comb-Glucose Story—T-Supers.

1. I have two colonies of bees in the upper story of the barn which will probably swarm before long, as they are very strong. I want to try some forced swarming, but I don't know exactly how to go about it. I do not want to have more than three colonies when I get through. If I shake say a third of the bees from each hive into the same new hive with either starters or full sheets of foundation, can I make them stay there without fighting?

2. What shall I do with the queens? and will I have to arrange the hives in a different order? The brood will not need to be moved will it?

3. Will it make any difference at what time of day the bees are disturbed?

4. I see in the Ladies' Home Journal for June, on page 36, that at

last paraffin comb filled with glucose has been made, and that "It duplicates the natural comb remarkably well." She (Dr. Walker) must have seen some of that alfalfa honey mentioned in a recent American Bee Journal, I guess.

5. I have been keeping my eyes open, but have not been able to run across any catalog that advertises any T-super like the one you use. Where do you send for yours?

I packed my two colonies last fall right in the same places in the barn that they occupy in the summer, and, in spite of the long and very cold winter, they came through in the finest kind of shape.

MINNESOTA.

ANSWERS.—1. If you shake a third of the bees from two hives into a new hive, the new hive being in a new location, this being done at a time when honey is coming in, there will probably be no fighting, but the bees will hardly stay in the new place unless you fasten them in for a time, perhaps two or three days.

2. You can leave each old hive on its old place with its old queen, giving a queen or a queen-cell to the newly-formed colony, at the same time leaving all the brood with the old colonies; but it isn't likely that you'll like the plan. Taking away a third of the bees from a colony will in most cases probably only make it swarm a little later.

Perhaps this plan will suit you better: Shake each colony, taking away all brood, with merely enough bees to keep the brood from chilling, and put this brood in a new hive in a new place. Put an excluder between the two stories of brood, having the queen in the lower story, and in time you will have an upper story of honey to extract. Or, you can remove the upper story in three weeks and put on a super of sections, providing the season is not too far advanced. Of course a queen or queen-cell should be given to the newly-formed colony.

3. The work may be done any time of day to suit your own convenience.

4. If each bee-keeper who subscribes for the Ladies' Home Journal should send in a respectful but earnest protest, it is likely that it would print something to undo as far as possible the mischief done by such an erroneous statement.

5. Having a thousand T supers on hand, I have not had any made for some time, but if you will ask for T supers with loose tins I think you will be able to get them from any of the leading supply-dealers. I find them listed by two of the largest manufacturers. Mine are from The A. I. Root Co. Some prefer having the T tins fastened to the supers, but it is possible that if they knew just how to use them they might prefer them loose.

Amount of Honey to Produce a Pound of Bees.

Can you give us an approximate of the amount of honey consumed in producing a pound of young bees? What has been done by the way of investigation?

JAMAICA.

ANSWER.—I remember having seen in foreign journals some estimate of the kind, but can not now recall what it was. Can any one help us out?

ITALIAN QUEENS!
Either Golden or Honey-Queens before July 1.

Our GOLDENS will come up with any other Golden strain. Our HONEY-QUEENS are what some breeders call "Red Clover Queens."

	1	6	12
Untested	$1.00	$ 5.00	$ 9.00
Tested	1.25	7.00	13.00
Breeders	5.00	....	....
2 frame Nuclei (no queen)	2.50	14.00	25.00

Nuclei will be ready to ship the latter part of May or 1st of June. When Queens are wanted with Nuclei add price of any Queen wanted. We guarantee safe arrival of all Queens and Nuclei. Our Breeders may be returned after 30 days if satisfaction is not given. Cash must come with all orders. Orders are booked and filled in rotation.

Mr. Gus. Picaman, of Litchfield, Ill., in a letter of Aug. 3, 1903, says: "Send me two untested honey-queens. The one I bought of you two years ago is all right. There are no better."

Mr. Frank D. Gunderson, of Oconomowoc, Wis., says in a letter dated August 1, 1903: "I like your queens the best of any that I have ever had." This man placed an order last August for 24 Nuclei to be delivered this spring.

Address all orders to
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LOUIS WERNER, box 387, Edwardsville, Ill.
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FROM MANY FIELDS

Heavy Loss in Wintering.

There was great loss among bees last winter. I had 31 colonies, 6 of them died of starvation, and 16 died with plenty of honey, and still they were protected better than ever before.

My honey crop was a little over 3200 pounds from 20 colonies, spring count, and I increased to 31, in 1903.

HERMAN HEURKENS.
Brown Co., Wis., June 6.

Have Great Hopes for Honey.

We have had a grand month of May for bees; but I have lost 14 colonies out of 46, through the severe winter. My bees winter on their summer stands packed with sawdust.

We entertain great hopes for the season just at hand.

H. DUPRET.
Quebec, Canada.

Hard Winter on Bees.

Last winter was a very hard winter on the bees in this part of Nebraska. I think that over half the bees in this county are dead. I lost 8 colonies out of 16. I wintered them out-of-doors, and had a good house fixed for them. They all had plenty of honey. I believe I will put my bees into the cellar next winter.

WM. BARTLETT.
Pierce Co., Nebr., June 2.

Wet and Cold—Poor Prospects.

It is very wet and cold, and has been so all spring. If we get any honey this season here things will have to change.

W. J. PICKARD.
Richland Co., Wis., June 2.

Trio of Bachelor Bee-Keepers.

I have 40 colonies in two yards, 1 colony dead and 1 queenless. White clover is blooming pretty freely, and conditions are now favorable for a fair crop.

I was very much amused at Mr. Baker's keeping "bach" (See page 379). I don't un-

$10,000 WE HAVE JUST COMPLETED OUR TEN THOUSAND DOLLAR BEE KEEPERS' SUPPLY MANUFACTURING PLANT
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BOSTON
Money in Bees for you.
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ROOT'S SUPPLIES.
Catalog for the asking.
F. H. FARMER,
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Up First Flight.
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ITALIAN QUEENS,
BEES AND NUCLEI.

Choice home-bred and Select Imported Stock. All Queens reared in full colonies.

One Untested Queen	$. 90
" Tested Queen	1.10
" Selected "	1.40
" Breeder "	2.20
" Comb Nucleus (no Queen)	1.10

All grades ready now. Safe arrival guaranteed.
For prices on quantities and description of each grade of Queens, send for free Price-List.
J. L. STRONG,
204 East Logan Street, CLARINDA, IOWA.
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July 8th
The Nickel Plate Road will run an excursion to Chautauqua Lake and return at one fare for the round-trip from Chicago, with return limit of August 9th, by depositing ticket. Transportation good on any of our three daily trains. Cheap rates to other eastern points. No excess fare charged on any train on Nickel Plate Road. Individual Club Meals, ranging in price from 35c. to $1.00; also service a la carte, in Nickel Plate dining-cars. Write John Y. Calahan, General Agent, 113 Adams St., Room 298, Chicago, for particulars. Chicago city ticket offices, 111 Adams St. and Auditorium Annex. Telephones 2057 and Harrison 2208. 11—24A4t

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derstand why he, Mr. Ed Pepper, and myself—three of the most up-to-date bee-keepers in the county—should be old bachelors, but our mothers take care of Mr. Pepper and myself. Now, Mr. Baker and Mr. Pepper have either got to marry or quit keeping bees, or I will. I am sure I will marry before I will quit keeping bees.

I would like to know what has become of Ann. If she was a little older, I would be tempted to move my bees to her county and try to persuade her to help me take care of them! CHAS. M. SIMMONS.

Marion Co., Mo., June 4.

Beedom Boiled Down

Anticipated Swarming.

What we call here now "brushed" or "shook" swarms are called in Europe "anticipated" swarms. Two methods have been in use there for quite a number of years. The first is called anticipated swarming by single permutation. It is exactly the process used here and needs not to be described. The second is much the best and is called anticipated swarming by double permutation.

To explain it as clearly as possible, let us suppose that the apiary contains only two hives and an unoccupied stand, thus:

Hive No. 1.	Hive No. 2.	
Stand No. 1.	Stand No. 2.	Stand No. 3.

When the time to operate comes the hive No. 2 is placed on stand No. 3. The queen and all the bees of hive No. 1 are driven out and put in a new hive on their own stand. They constitute a swarm just in the same condition as those made by single permutation. The hive No. 1 thus deprived of its bees and queen is then placed on stand No. 2 and receive there the field-bees of hive No. 2. We have then:

Swarm.	Hive No. 1.	Hive No. 2.
Stand No. 1.	Stand No. 2.	Stand No. 3.

Eight days later the hive No. 1 being without queen, will have a number of queen-cells. It is then put on stand No. 3 and the hive No. 2 brought back to its place. We have finally:

Swarm.	Hive No. 2.	Hive No. 1.
Stand No. 1.	Stand No. 2.	Stand No. 3.

Now for the advantages of this method: The swarm on stand No. 1 is in the same condition as those obtained by single permutation. But the hive No. 2 on stand No. 2 will give a must greater surplus than would a forced swarm. It has had a field-force and a brood-nest all the time. Having not to rebuild a brood-nest it can work in the surplus boxes much more than a forced swarm; and finally the absence of its queen during the eight days that the brood-nests were exchanged, has killed the swarming fever completely.

As to the hive No. 1 now on a new stand, it has no field-force, has lost a large number of emerging bees while it was on stand No. 2 and will requeen out of its queen-cells without danger of swarming.

This method is the invention of Mr. De Vignole, of Belgium. I might add here that there is no hunting of queens or queen-cells to cut out when using it.—ADRIAN GETAZ, in the American Bee-Keeper.

Radium as a Foul-Brood Cure.

Radium is just now commanding a degree of attention that is in an inverse ratio to its scarcity; but from what we do know of it, it is entirely safe to say it is destined to revolutionize the science of medicine so far as bacteriology is concerned, and add immeasurably to human life and comfort. It really seems as if we were on the threshold of an advance in science that will change for the better all

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conditions of human life. This exceeding scarceness of this substance is at present the only draw back to a rapid acquisition of knowledge as to what it can and will do for man. But that objection once applied to aluminum; for some of us can remember when it was as valuable as gold, even while we drink tea made in cups of that same metal. A very well-informed writer in the British Journal has this to say about it as a cure for foul brood. His last sentence will surely be the hope of all of us:

"In experiments made it has been found that the rays of radium have proved fatal to all kinds of bacteria. A great many tests have been made in treating different kinds of germ diseases, and in almost every case exposure to the rays destroy the germs, so that on trial being made it was proved that they cease to grow and multiply in a gelatine medium. Experiments have been made whereby the rays have been allowed to pass through a hole in a metal disc and strike on a small mass of gelatine containing active germs, with the result that they were developed, *except on the spot where the rays had struck*. This undoubtedly proves that a comb so treated would be sterilized, and that radium may prove able to accomplish a cure of foul brood. I ask no one to accept this as a truism until the experiment has been tried and found a success. All I now plead for is, that, theoretically, it should do what I claim for it. Some of our scientific bee-keepers might be able to bring a small piece of comb containing active germs of foul brood, under the action of radium rays, and prove if the deadly possibilities of germ or spore would be rendered innocuous. The heavy cost of even the most minute particle may prove a bar to any thing more than this simple experiment; but this wonderful force is only in its infancy, and by and by will become more common and attainable. I hope this is not merely a vain dream!"—Gleanings in Bee-Culture.

Bee-Keeping in Tunis.

The material for bee-hives used by the Tunisians is very inexpensive, and nothing more or less than Mother Earth. However, the soil must be of a certain nature, a soft porous stone. Square holes were cut in the ground, 80 cm. long, 40 cm. wide and 30 cm deep. These holes are cut very smooth. Bars are used for the bees to fasten their combs to. Each cavity is covered with sticks, and a covering of earth. An entrance is left in the center of each hole. About 50 such hives are located together under one roof. The Tunisians use smoke to handle their bees and do not protect themselves against stings in any way. (Revue Internationale L'Apiculture.)—American Bee-Keeper.

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2. Sending your own name with the $1.00 for the Bee Journal will not entitle you to a Queen as a premium. The sender must be already a paid-in-advance subscriber as above, and the new subscriber must be a **NEW** subscriber; which means, further, that the new subscriber has never had the Bee Journal regularly, or at least not for a whole year previous to his name being sent in as a new one; and, also, the new subscriber must not be a member of the same family where the Bee Journal is already being taken.

We think we have made the foregoing sufficiently plain so that no error need be made. Our Premium Queens are too valuable to throw away—they must be earned in a legitimate way. They are worth working for.

We will book the orders as they come in and the Queens will be mailed in May or June. Will you have one or more?

If you cannot get a new subscriber, and want one of these Queens, we will send the American Bee Journal a year and the Queen—both for only $1.50. Address,

GEORGE W. YORK & CO., CHICAGO, ILL.

What Yon Yonson Thinks

Peter vent to sellebrate,
 To have some fun, "dats all."
But, Oh! he met an awful fate—
 Now he don't vas here a toll.

He tak a drink of rotten visky,
 His hed begin to krack;
He start to cross da raleroad—
 Da train vas on da track.

His hed vas got so dissy
 He don't vas can look out.
Da train run over Peter,
 An' poor Peter petered out.

Unkle Sam he got da mony
 Vat vas paid da rite to mak
A drunkard of poor Peter,
 An a precious life to tak;

An it all vas done for money,
 To mak somebody grate.
I vish dat Peter stayed at hom,
 An' don't vas sellebrate.

Vel, you no Peter Peterson, he had awful bad luck. Peter vas awful good feller, but he had a awful bad folt—he lak visky.

Last fort of Juli he vent to sellybrate, an he tak on som visky, an purty soon he don't know if he vas Peter or sombody else. An' ven he start to kross da ralerode trak da trane run aganst him, an now it don't vas any more Peter.

But Peter don't vas alone to blame. Da saloon keeper vat sel Peter da visky, he is da feller vat kill Peter. But dom don't goan to hang da saloon keeper, caus Unkle Sam he sell da saloon keeper licens to kill people po das vay. Old "Unkle Sam" he git fat vid mony from da saloon keepers, and da saloon keepers dom git fat vid mony from da fellers vat bi da visky, but da fellers vat bi da visky dom git notting but snakes in der boots and vheels in deir hed, vat run round so fast dom sure to run to da bad.

But "Unkel Sam" an da saloon keeper is da fellers vat is to blame. "Unkel" he got law vat say dom can't sell to any body vat is known to be in da habit of gettin' drunk, but dat is yust da kind of fellers vat dom sell to. Ay gess Unkel is gitten kind of old and childish. My goodnes, he mite no dom git drunk ven dom tak on visky, so das da vay it goes. Da people all time vont more laws, and dom don't can use vat dom got. If Peter had run over some body den dom vould 'rest Peter; but Unkel and da saloon keeper vat is da caus of it all dom go free, and git deirs pocket full of mony besides, and da people dom holler, Hurrah for da grand old parties and Ole Unkel Sam! An purty soon if da peoples don't votch out, old "Unkel" git drunk an fall in da ditch him self.

Ay tank its better "Unkle Sam" consult vid his vife on das visky bissnes, be fore all da boys git to be slaves of visky, and it don't be any more liberty in das country. Ay tank purty soon da goddes of liberty vil be shame to stan' on top of da dome of ours capetal in Vashington, and mebby she vil climb down and sit in da shade till old Misses Unkel Sam do a little house-cleaning down below, and mak old "Unkel Sam" yoin da Salvation Army, and vare a cap in place of dat big plug hat. An ven Missus Sam git after Ole Unkel vid da broom, he better votch out or—

Unkle Sam, vil git a slam
 Vat mak of him a better man,
An my good lan', I bet she can
 Mak "Unkel Sam" to understan',
Or vid dat broom she'll soon mak room
 For a whole lots better man.

In Chicago it is lots of big churches and preachers and good Christians, an big Salvation Army, vot is vorking hard to save da people from visky and da devvel, but ay see in da daly paper dat da saloons is selling visky about 24 hours out of every day, an dom is vorking hard to graft more hours on to da town clock so dom can sel more visky. Da saloon mans in Chicago have grafted sin

Some Apiary Stock at a Bargain!

We offer for sale, from our stock of bee-supplies, the following list, some of which is new, and the balance as good as new:

20	Wood-bound 10-frame Zinc Honey-Boards	15c each.
1080	New. Clean, Wired Extracting Cambs (L. size)	15c each.
420	New L. Brood-Frames with full sheets wired foundation	10c each.
400	Good L. Brood-Combs	12c each.
1	"New Model" Solar Wax-Extractor (glass 26x60 in.)	8.00.
1	Wooden Honey-Tank with galvanized iron bottom (holds 1800 lbs.)	10.00.
1	6-inch Comb Foundation Mill	15.00.
1	10-inch Comb Founnation Mill	25.00.
100	New L. 10 fr. Dovetailed Hives (each consisting of a Body, Cover and Bottom-Board—all nailed)	95c each.

If you order Combs and Hives, the Combs can be put right into the hives and shipped in that way. All the above can be shipped promptly, so long as they last. First come, first served. What do YOU want out of the lot? or do you want it all? (No order filled for less than $5.00 from the above list.) Also BEES AND QUEENS, and Stanley Queen Incubator. Send for free Circular

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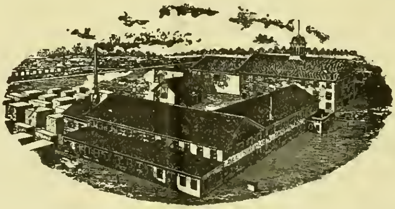

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Complete Line of LEWIS' SUPPLIES, at Factory Prices.
QUEENS AND NUCLEI Beyond Comparison.

SEND FOR CATALOG

THE FRED W. MUTH CO.,
51 Walnut Street, Cincinnati, Ohio.

and da devvel on to every ting vot is able to grow corruption, an it looks lak da market on vild oats goan to tak a tumble after harvest. I iss frade da bad man 'goan to git Chicago if dom don't votch out, but if da vimens vil yust turn a vay from stile an go out after dom little children vot is starving on da streets, and give dom somting to liv fur, feed dom, an bring dom in da chirch, an mak dom feel lak dom vas at home an velcome dere, den by an by dom grow up and be good mans and vimens, and Chicago be so full of good peepels da bad man don't vas dare to stay in Chicago. Den if da vimens vill all rite to Mrs. "Unkle Sam," an ask her to git after her ole man vid a sharp stick, an mak him to tighten up his suspenders, an lay off his plug hat, an set his foot rite down on das visky bissnes, and stop da whole ting, den ay tank da bad man vil have to move to da odder side of da oshun, an I hoap he git shipreckt about 700 miles from no place, caus he is no good in das country.

Most every body lak to go to hevven, but I isa frade ve all iss making awful slow time, an if ve don't votch out ve don't vas live long nuff to git half vay to hevven; but if every Christian man an voman vould rite to da law makers, and youst flooc dom vid letters, dom vould hav to eder mak som good temperance laws or polish up som of da old rusty laws so dom vould scour, an soon ve vould be rid of das visky bissnes, and da Unity States vould be a hevven. Das vot Yon Yonson tank bout das bussiness. Ven da vimens can vote all over da Unity States, den visky be scarce. Da mans aint to be trusted to vote genst visky even in congress.

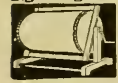
Yon Yonson.

CONVENTION NOTICE.

Texas.—The Texas State Bee-Keepers' Association will meet at College Station, Tex., Tuesday, Wednesday and Thursday, July 5, 6 and 7, 1904, beginning at 10 a.m. on Tuesday. This will be during the meeting of the Texas Farmers' Congress, so it will be a great time. Railroad rates and board will be cheap.

The convention will open at the time named. Come early and take part.

Louis H. Scholl, Sec.
College Station, Tex.



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50 or more colonies of **BROWN BEES** in Langstroth-Simplicity hives, made of dressed cypress and painted, with Langstroth frames—all standard size. Will take $3.00 per strong colony as they stand. Address for information,
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A place to work in an apiary within 150 miles of St. Louis; 5 years' experience; 17 years old. State terms and wages.
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To write for our prices on **SECTIONS.** We manufacture them, and are dealers in **BEE-SUPPLIES.** Send for special price and Catalog.
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24A17t CADOTT, WIS.
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Fourth of July.
One fare for the round-trip, plus 25 cents, July 2d, 3d and 4th, within 200 miles from the starting point on Nickel Plate Road. Return limit July 5th. Chicago Depot: LaSalle and VanBuren Sts. City Ticket Offices, 111 Adams St., Auditorium Annex. Telephones, Central 2057, and Harrison 2208.
9—24A4t

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HONEY AND BEESWAX

MARKET QUOTATIONS

Chicago, May 9.—The market has an oversupply of comb honey, very little of which will pass as No. 1 grade—price is 11@12c per pound, and off grades at a corresponding value. Extracted, 6@7c per pound for best grades of white; amber colors, 5@6c per pound. Beeswax, 30@32c. R. A. Burnett & Co.

Cincinnati, O., June 7.—Since warm weather set in, hardly any sales of comb honey are made; what little there was sold, was fancy white and brought from 12½@13½c. Extracted has a fair demand, as follows: Amber, in barrels, from 5¼@5¾c; in cans, ½c per pound more; alfalfa, 6½c; fancy white clover, 7½c. Nice yellow beeswax, 30c. C. H. W. Weber.

Albany, N. Y., June 3.—The honey market is very dull now, and prices nominal. Receipts are very light and demand the same. We quote comb honey, in good order, white, 13@15c; mixed, 12@13c; dark, 10@12c. Extracted, buckwheat, 5½@6c; mixed, 5½@6c; white, 6½@7c. Beeswax, 30@32c. H. R. Wright.

Cincinnati, April 18.—The honey market here is reassuming activity, and judging from present indications, and the lateness of the season, the last season's crop will be consumed before the arrival of the new. Amber extracted in barrels and cans, 5½@6½c; white clover, 6½@8 cents, according to quality and package. Fancy comb honey sells at 12@15c. Beeswax, 30 cents. The Fred W. Muth Co.

Boston, May 14.—The demand for honey is extremely light, almost nothing, and supplies are heavy for this time of the year, and our prices therefore are largely nominal. We quote fancy white at 15@16c; A No. 1, 14@15c; and No. 1, 14c, with no call for under grades. Extracted, from 6@7c. Blake, Scott & Lee.

Kansas City, April 18.—The demand for honey is a little better than it has been. Prices on strictly fancy comb are $2.50 per case, if not candied; the great trouble with the majority of honey coming from the West at present is that it is more or less candied, and about $2 00 to $2.25 is all we can get for it; amber is selling at $2.25 per case. Extracted is dull at 5@6c. Beeswax in good demand at 30c.
C. C. Clemons & Co.

New York, May 21.—The market on comb honey is decidedly dull and it is almost impossible to move large blocks. What little trade there is, is done in a small way. We quote nominally: Fancy white at 13c; No. 1 at 12c, and amber at 10c; no demand for dark at all. Extracted is in fair demand at unchanged prices, with a good supply. Beeswax remains firm at 30c, but we expect a decline very shortly.
Hildreth & Segelken.

Philadelphia, June 8.—The comb honey season is now about over. There are not enough sales to fix any price. For the last 10 days commission men have been accepting any offer they could get, but did not fix any market value. Extracted honey seems a little off in price, some lots from the south being offered as low as 5c in barrels. We quote: Southern extracted, 6c. Fancy white clover, 7c. Beeswax is a little off; 29c for bright yellow is the top market price.

We are producers of honey and do not handle on commission. Wm. A. Selser.

San Francisco, June 1.—White comb, 1-lb. sections, 12½@13c; amber, 9@11c. Extracted, white, 5½@6c; light amber, 5@5¼c; amber, 3¾@4¼c; dark amber, 3¼@3¾c. Beeswax, good to choice, light, 28@30c; dark, 26@27½c.

Offerings of new honey are looked for in the near future, but not in heavy quantities. Stocks of old honey in this center are of quite moderate proportions and include little of high grade. Common qualities are not receiving much attention.

HONEY AND BEESWAX
When consigning, buying or selling, consult
R. A. BURNETT & CO.,
199 South Water St. Chicago, Ill.
Please mention Bee Journal when writing.

WANTED! FANCY COMB HONEY
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To say to the readers of the BEE JOURNAL that

DOOLITTLE...

has concluded to sell **QUEENS** in their season during 1904, at the following prices:

1 Untested Queen ..	$1.00
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Why does it sell so well? Because it has always given better satisfaction than any other. Because in 26 years there have not been any complaints, but thousands of compliments.

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AMERICAN BEE JOURNAL

WEEKLY—$1.00 A YEAR.
Published by GEORGE W. YORK & CO., 334 Dearborn Street.

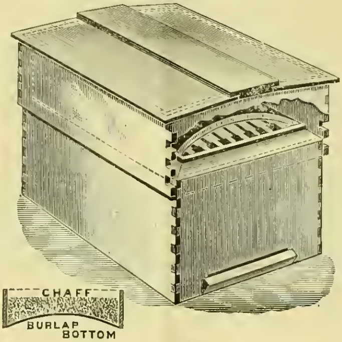
44th Year. CHICAGO, ILL., JUNE 23, 1904. No. 25.

WEEKLY

THE LATE MRS. L. HARRISON.
(See page 437.)

SEEMS STRANGE

To talk about wintering now. But don't let last winter's losses occur again. Insure successful wintering by putting your new swarms into **ROOT'S DOVETAILED CHAFF HIVES.** ∴ ∴ ∴ ∴ ∴ ∴ ∴



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It protects against extreme cold. It protects against extreme heat. It is used in Cuba and Mexico to keep the bees warm in chilly nights and cool in the hottest days. It winters the bees on summer stands as far north as they can be raised. In fact, it is the hive for every bee-keeper. For comb honey production it is in the first ranks. The ample protection of the super against cold permits uninterrupted comb-building so necessary in the production of comb honey. Send for our Catalog that tells all about it. ∴ ∴ ∴

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Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor. CHICAGO, ILL., JUNE 23, 1904. Vol. XLIV—No. 25.

Editorial Comments

The Marketing of Honey.

This is a subject that has been harped on so long that we suppose many readers are almost tired of it.

But the time will soon be here again, when there will be honey to sell—the new crop—and no doubt a number of bee-keepers will be glad to learn the very best way to dispose of it.

We hereby invite those who have been successful in working up a local demand for honey to describe their plans for the readers of the American Bee Journal. There are certain general details in all methods that will work in any locality. Let us have such descriptions soon, so that they can be published in good time to be of use this season. As you have been helped by what others have written, why not turn in and help others by telling your methods? "An even exchange is no robbery."

Prevention of After-Swarms.

Prevention of prime swarms is not one of the easiest of problems; prevention of after-swarms is much easier. The following plan will generally prove successful in preventing all after-swarming:

When the prime or first swarm issues put the swarm on the old stand, placing the old colony that is in the old hive close beside the swarm that is now on the old stand. A number of queen-cells are in the old hive, and when the first young queen emerges from its cell an after-swarm is likely to issue. This after-swarm may issue about eight days after the first swarm issued. Instead of waiting for that, however, you will remove the old hive to a new location six or seven days after the issuing of the first swarm. The result of that will be that all the field-force of the old colony, instead of going back from the fields to their own hive, will go to the old location, and join the swarm on the old stand. That will weaken the old colony by just that number of bees, of course, and the fact that they are thus weakened will have a tendency to make them give up the thought of further swarming. Not only is the weakness of the colony an argument against further swarming; a still stronger argument lies in the fact that the harvest has ceased. At least it has ceased for them, for as no field-bees are returning laden with nectar, it is the same to them as if there were no nectar in the fields, and they are likely to conclude that they will do no more swarming.

The swarm will thus receive all the field-force, and will be so strong as to do best work at storing.

Weight of Sections of Honey.

D. M. M., an able correspondent of the British Bee Journal, says in that journal:

> An eminent bee-keeper, in recording his take of several thousand sections, showed that they averaged only 14¾ ounces. I am much surprised that any one, carrying on the pursuit on a large scale, should not see the very great advantage of increasing the width of his sections the small fraction of an inch, which would make all his surplus comb honey weigh (practically) 16 ounces to the pound section. In selling them, I fancy, he would be paid so much per pound, but I question very much if the retailer would be so strict in handing them over the counter, so I expect a tidy little profit would be reaped out of the deal—at the cost of the consumer, of course. I have already called attention to this point, and I trust bee-keepers in this country will not introduce this undesirable innovation, which will not be to the advantage of the craft in the long run. Our orthodox section turns out as near a pound of honey as we are ever likely to secure, and this is all sections should weigh.

A novice reading that paragraph might be induced to believe that by adopting a section of a certain size a bee-keeper "would make all his surplus comb honey weigh (practically) 16 ounces to the pound section." If that were so, the bee-keeper referred to would no doubt have adopted that size long ago. But in this country, however it may be in England, if he were to have the exact size of section that when finished would weigh a pound, he would need a different size for next year. There may be a difference of an ounce or more in the weight of sections in two different years. Two different localities in the same year will also give different weights. The "orthodox section" of England is probably 2 inches wide. The sections mentioned, which in that particular year weighed 14¾ ounces, were probably 1⅞. Taken one year with another in this country, will the 2-inch width come as near to a pound as the 1⅞?

Demand for Bees and Beeswax.

The heavy losses of the past winter are shown by the large demand for bees at the present time, and also by the large amount of wax offered, many of the combs from the dead colonies having been melted up.

Ladies' Home Journal and Bogus Comb Honey.

On page 403 we called attention to the publication in the great Ladies' Home Journal of a slight variation in the Wiley manufactured comb-honey misrepresentation, and requested our readers to write Editor Bok their protest, and also ask for a correction of the misleading and untruthful statement made by Dr. Emma E. Walker.

We also said that we had written Mr. Bok, and here is a copy of our letter to him:

CHICAGO, ILL., June 1, 1904.

MR. EDWARD BOK,
Editor Ladies' Home Journal, Philadephia, Pa.

My Dear Str:—I notice in your June issue, page 36, second column, a statement by Emma E. Walker, M.D., which has no truth in it whatsoever. It is simply a variation of a story "made out of whole cloth" some 20 years ago, to the effect that honey-comb is made out of paraffin by machinery, the cells filled with glucose, and then sealed over with a hot iron, etc.

Having been connected with the bee-keeping industry for 20 years, and 12 years of that time editor of the American Bee Journal, I feel entirely competent to enter a complete denial of the whole fabrication. There is not a scintilla of truth in the statement.

For over 20 years there has been a standing offer of $1000, made by a reputable firm, and one abundantly able financially to back up its statements (and I have also made the same offer), for a single pound of comb honey made without the intervention of bees. That offer remains untaken, and doubtless will always remain so, as it is utterly impossible for man to duplicate the wonderfully delicate work of honey-bees.

I beg of you to publish a prompt correction of Dr. Walker's harmful statement in your first possible issue. For over 20 years the old American Bee Journal (now in its 44th year) has been correcting and denouncing the ever-recurring publication of this gratuitous comb-honey canard. But I never expected its appearance in that usually high authority—the Ladies' Home Journal. However, at last it is there, but I am sure not with its able Editor's knowledge and sanction.

Trusting that this very important matter will receive your personal attention, and thus so far as you can relieve the honorable industry of honey-production from the misrepresentation placed upon it, I am, Fraternally yours,

GEORGE W. YORK,
Editor American Bee Journal.

In response to the above letter, we have received the following from the Ladies' Home Journal:

PHILADELPHIA, PA., June 6, 1904.

MR. GEORGE W. YORK,
Editor American Bee Journal, Chicago, Ill.

Dear Sir:—Please accept our sincere thanks for your very courteous letter in regard to a blunder that appears to have been made by Dr. Walker, in her article on adulterated honey. Naturally, we ourselves do not profess to be authorities upon the subject. And Dr. Walker's work had been so uniformly good that it had not entered our minds that she had made a blunder in this case. We shall take the liberty of sending your letter to her, and quite likely she will be moved to make a suitable correction in due time. But we are already working on our September and October issues.

Very truly yours, WM. V. ALEXANDER,
Managing Editor.

We were quite sure that the editor of the Ladies' Home Journal would take the right view of the matter, and do what he could to help correct the harmful comb-honey statement made by Dr. Walker. And we believe she will hasten to write a full explanation and correction. But another unfortunate thing is that it will not be possible to have it published in the Ladies' Home Journal before its September or October issue. Of course, it is far different with a publication having over a million subscribers, from what it is with a daily newspaper, or even a weekly paper. Work on so large an edition as the Ladies' Home Journal publishes every month, must be done far in advance of the date of issue. But we believe a satisfactory correction will be given as soon as possible by Dr. Walker, in her department where appeared the original erroneous statement.

Some Peculiar People.

There are such among bee-keepers as well as in other walks in life. We know a few of them. An editor hears from them occasionally. Especially the kind that can't bear to see the *truth* in print, especially if it happens to fit them or their friends. They can stand flattery all right, and believe what is not true if it happens to please them. Of course, we do not expect everybody to agree with what we have to say personally in the American Bee Journal, or perhaps with what others have to say. But that does not prevent our speaking or printing the truth as we and others see it.

Some will even go so far as to stop subscribing for a paper if the the editor is inclined to tell the truth about some of their pet schemes or things. But no honest editor is going to stop printing what he believes is truth, and what ought to be said, just because a few subscribers take unreasonable offense. At least we know one or two editors that are not quite so cowardly. We are very willing to listen to real argument, whether respectful or otherwise, and are always open to conviction, but until convinced that we are wrong we have formed the habit of standing firm in what we believe is right. We do not have to give account for any other conscience but our own. So we expect to continue to do our duty as we are given to see that duty. We believe that is what ninety-nine out of every one hundred of the people want to see, and the kind that should be demanded by all.

Of course, we do not expect that the American Bee Journal will please all bee-keepers, as all do not see alike. But the peculiar thing is, that sometimes when something is said very plainly in the American Bee Journal—which is also the truth—there are some who, instead of trying to show wherein the one who wrote is wrong, simply say, "Stop my paper!" And it is done.

We hope such people will take some other good bee-paper, although they are liable to repeat their queer action just as soon as the other editor says something they don't like.

Well, such is life. We editors, at least, must take it as we find it, and not allow anything like that to move us from the path of duty.

"**The Hum of the Bees** in the Apple-Tree Bloom" is the name of the finest bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us *one new* yearly subscription to the American Bee Journal at $1.00.

Miscellaneous Items

Mr. T. O. Andrews was recently elected to the presidency of the California National Honey-Producers' Association. He succeeds Mr. Geo. W. Brodbeck, who was compelled to retire on account of continued ill health. However, he is recovering slowly, and it is hoped he may soon be entirely himself again.

Mr. Groggshall is the way Sonnambulist refers to W. L. Coggshall, one of New York State's "lightning bee-keepers." There is no "grog" either in the man or his name. At least he always seemed fairly sober whenever we have had the pleasure of meeting him. It can't be that "Sommy" was a little groggy when writing! We decline to believe it without "fire-(water)-proof" evidence.

Mr. Richard Hyde, of California, secretary of the Tulare County Bee-Keepers' Association, died June 2. His death was the result of a stroke of apoplexy. He had removed from the East to California in 1885. Soon afterward he engaged in bee-keeping, in which he countinued actively until his death. He was a native of Wisconsin. He left to mourn his sudden departure a widow and two young daughters.

The Rural Bee-Keeper is the name of another new monthly bee-paper, published by W. H. Putnam, of Wisconsin. The June issue is on our desk. It seems that the first issue was in April, but the June number is the first to reach our office. It makes the best appearance of any new bee-paper put out in over ten years, if we except the Rocky Mountain Bee Journal, which was sold recently, and so ceased to exist.

Mr. Geo. C. Lewis, president of The G. B. Lewis Co., of Watertown, Wis., dropped in to see us when in Chicago last week. He reports the largest season's business they have ever had. For several weeks their force has been working 20 hours out of the 24. Their capacity is over 100,000 sections a day, and other manufacturing departments in proportion. They had not anticipated such a large business this season, as reports showed rather a heavy loss of bees in wintering. But it seems that this has made no difference in the general demand for bee-supplies.

"**The St. Croix Valley** Honey-Producers' Association" is the name of a new organization in Wisconsin. Its officers are: President, Geo. Shafer; vice-president, C. A. Thompson; secretary, A. L. Palmer; treasurer, Wm. Hartwig; and general manager, Leo F. Hanegan. Its objects are as follows:

> "To promote the interests of bee-keepers; to protect them in their lawful rights; to enforce laws against the adulteration of honey; to furnish its members bee-supplies and bee-literature at as near wholesale prices as possible; to grade, pack, and market our product under a common brand, etc."

Western Bee Journal is the name of the latest claimant upon the attention of bee-keepers. The June issue—Vol. I., No. 1—is on our desk. Mr. P. F. Adelsbach, of California, is its editor and proprietor. As no mention is made of it, we are left to guess that this new paper is the result of the union of the late Pacific States Bee Journal and the Rocky Mountain Bee Journal. It is a great improvement over the former, but hardly equal to what the latter was. Still, it gives promise of being a publication worthy of the patronage of the bee-keepers in the territory which it seems to desire to cover, if we may judge by its name.

A Doggoned Hybrid Pup seems to be the latest "arrival" at Rootville, if we may judge from the following paragraph which appears in Gleanings for June 1:

NOT A FISH STORY; BARKING UP TRADE.

This has nothing to do with bees; and if you are not interested, do not read it. My boy has a puppy, a cross between a Scotch terrier and a pointer, that keeps saying "Yor-rick, Yor-rick," every hour of the day; and sometimes he keeps on saying "Yor-rick" all night. Late one night, while I was trying to sleep, it popped into my head that the dog was calling to another bee-editor—the one who stands for the American Bee Journal. I doubt whether a human being could pronounce the word more distinctly than this pup does at times. I wrote friend "Yor-ick," telling him about this wonderful canine that could pronounce his name so distinctly, and that I thought I would name him *York* if he had no objections. He writes back that I must be a good interpreter, and thinks if I should send him to the St. Louis Exposition he would be a great attraction for the Root Co.'s exhibit. He thinks, however, if I should teach him to say "York's Honey," he could use him in Chicago. He has no objection, he says, to my using the name, "but it must be understood that the dog is to be a Prohibitionist, without any *cur*-tailment about him except his own. Then he winds up by saying, "Please excuse this doggoned letter." I have set myself to the task of teaching the dog to howl "York's Honey" just as lustily as he now "Yor-ricks" at night; and if I succeed I am going to put him in York's advertisement to bark up trade.

We hardly know what to think of the intended (?) honor of having a "cross terrier" with a "Scotch pointer" named after us. At first we were inclined to submit, thinking that we might never be guilty of any act that would disgrace so intelligent a dog as Master Leland Root owns. After reading the above, we don't see how we can object, if the pup's articulate language is not misinterpreted by his most intimate friends. But we fear (not having seen or heard this canine prodigy) that considerable imagination is invoked by those who have decided that he insists on a continuous vaudeville performance of "Yor-rick."

We have just been wondering how it would be if we should get a little Duroc Jersey hoglet for a backyard pet. We could very appropriately call him "Root," as that would be about what he could do to perfection. But we think we'll not get the "Root-er" until that Prohibitionist pup is able to say "York's Honey," so he can earn his keep by helping us to "bark up trade."

▪▪▪▪▪▪▪▪▪

The Fourth Annual Meeting of the Texas State Bee-Keepers' Association, at College Station, Tex., on July 5 to 8, promises to be a big affair. A large notice has been sent out giving the program, stating the advantages of membership, and also the following concerning the apiarian exhibit to be held in connection with the meeting:

> An exhibit of apiarian products will be made, and blue ribbons for first prizes and red ribbons for second prizes will be awarded. All of the bee-keepers who have something to show will please write the secretary about it, and make arrangements to help make this a great show of bee-keepers' productions.
>
> The premium list is as follows:
>
> BEES.
>
> Best single-comb nucleus, golden Italian....................
> Best single-comb nucleus, 3-banded Italians...... ....
> Best single-comb nucleus, Holy Land........................
> Best single-comb nucleus, Black........ ....
> Sweepstakes on bees—greatest number of different races; races one-frame nucleus.......................................
>
> HONEY.
>
> Best exhibit of section comb honey..........................
> Best sample (12 lbs.) case section honey....................
> Best exhibit of bulk comb honey....:........................
> Best sample (12 lbs.) bulk comb honey.......................
> Best exhibit of extracted honey.............................
> Best sample (12 lbs.) extracted honey.......................
>
> MISCELLANEOUS.
>
> Best exhibit of beeswax................................ .....
> Best sample cake bright yellow wax, not less than 2 pounds..
> Best gallon of honey-vinegar................................
> Best display of honey-plants, pressed and mounted...........

For further information, if desired, address the secretary, Louis H. Scholl, College Station, Tex.

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we have used it ourselves.

PRICES, prepaid—Sample copy free; 10 for 20 cts.; 25 for 40 cts.; 50 for 70 cts.; 100 for $1.25; 250 for $2.25; 500 for $4.00; 1000 for $7.50. Your business card printed free at the bottom of the front page, on all orders for 100 or more copies. Send all orders to the Bee Journal office

◆

See Langstroth Book Offer on another page of this copy of the American Bee Journal.

Sketches of Beedomites

MRS. L. HARRISON.

As announced on page 404, Mrs. L. Harrison passed away while in St. Andrew, Fla., May 26.

In a letter to us from her husband, Mr. L. Harrison, dated June 5, he writes as follows:

> FRIEND YORK:—I have little to add to Mrs. Harrison's biography, more than you already possess. She was for 17 years apiarian editress of the Prairie Farmer, and for two years of the Orange Judd Farmer, when the infirmities of advancing years warned her to resign.
>
> She has spent 13 winters in her cottage here at St. Andrew. She has done much mission and church work here for several years past, and was held in great esteem, and was greatly beloved by the people of St. Andrew. Her funeral was very largely attended. She had suffered much for six weeks, and death came as a glad release. Her life work well done, she has gone to her reward. Her age was 72 years.
>
> LOVELL HARRISON.

In 1893, we published the following sketch of Mrs. Harrison, taken at that time from the "Portrait and Biographical Album of Peoria County, Illinois," which locality was her home:

> Mrs. Harrison is deserving of special mention on account of her eminent success as a bee-keeper and a writer on the management of the honey-producing insects. "A B C of Bee-Culture" has this to say of her:
>
> "Among women no bee-keeper is more widely known than Mrs. Lucinda Harrison. Born in Coshocton Co., Ohio, on Nov. 21, 1831, she came in 1836 to Peoria Co., Ill., her parents, Alpheus Richardson and wife, being pioneer settlers. Public schools were at that time undeveloped, and educational advantages few, but her parents gave her the best to be had in private schools. Her brother Sanford was a member of the first class which was graduated from Knox College, and she then spent a year at an academy taught by him at Granville, Ill. She taught school from time to time until 1855, when she married Robert Dodds, a prosperous farmer of Woodford county, who died two years later, leaving her a widow at 25. She was married to her present husband on July 4, 1866."
>
> Mrs. Harrison thus describes her entrance into the ranks of apiarists:
>
> "In 1871, while perusing the reports of the Department of Agriculture, I came across a flowery essay on bee-culture from the graceful pen of Mrs. Ellen S. Tupper. I caught the bee-fever so badly that I could hardly survive until spring, when I purchased 2 colonies from the late Adam Grimm, of Jefferson, Wis. The bees were in 8-frame Langstroth hives, and we still continue to use hives exactly similar to those then purchased. I bought the bees without my husband's knowledge, knowing full well that he would forbid me if he knew it, and many were the curtain lectures I received for purchasing such troublesome stock. One reason for his hostility, was that I kept continually pulling the hives to pieces to see what the bees were at, and kept them on the warpath.
>
> "Our home is on three city lots, and at the time I commenced bee-keeping, our trees and vines were just coming into bearing, and Mr. Harrison enjoyed very much being out among his pets, and occasionally had an escort of scolding bees.
>
> "Meeting with opposition made me all the more determined to succeed. I never wavered in my fixed determination to know all there was to be known about honey-bees, and I was too inquisitive, prying into their domestic relations, which made them so very irritable."
>
> It is credited to Mrs. Harrison that she has written more than any other woman in the world on the subject of bee-keeping, as opening up a new industry for women. Her writings have been extensively published not only in the United States, but in Great Britain and on the Continent, as well as in Australia and the South Sea Islands. Her articles have been translated into French, German and Italian.
>
> Mrs. Harrison is a strong, vigorous, and advanced thinker, and is a believer in the rights and privileges of women. Her contributions in literature embrace not only articles on bee-culture, but likewise on horticulture. Her first writings appeared in the Germantown Telegraph, of Philadelphia, and Colman's Rural World, of St. Louis.
>
> The perseverance of Mrs. Harrison was rewarded, her husband's opposition ceased, and he himself became interested in the bees, helping to care for them, declaring that he believed that it would add ten years to his life. For a number of years her apiary has contained about 100 colonies. She is prevented from doing as much as she otherwise would by ill-health and family cares, for, although childless, she has been a mother to several orphan children.
>
> She is best known as a writer, her many contributions to the press being marked with vigor and originality, with a blunt candor that assures one of her sincerity. She credits bee-keeping with making her life more enjoyable by opening up a new world, and making her more observing of plants and flowers, with which, we may add, her home is quite surrounded.
>
> Mrs. Harrison is plain and unassuming in her manners, kindly and charitable. She says, "The way to be happy is to be usefully employed." She has great energy and perseverance, with large ex-

ecutive ability, and, notwithstanding her delicate health, accomplishes much. She has written her name among the noble and useful ladies of our land, who are a blessing to the community in which they live, and an honor to their sex.

It was our good fortune to have at least a slight acquaintance with Mrs. Harrison. We had met her at conventions, and several years ago visited at her home in Peoria, Ill. She was an earnest, practical worker, and made a success of her bee-keeping, in which she was so deeply interested. She had been an occasional contributor to the columns of the American Bee Journal for nearly a third of a century. At one time she was perhaps the most widely known woman bee-keeper in the world.

In the death of Mrs. Harrison we feel that we have lost a personal friend. Surely bee-keeping has one less faithful and devoted follower.

Mr. Harrison may be assured that among bee-beepers the world over he will have sincerest sympathy in his bereavement.

Contributed Articles

Queen-Excluders—Difference in Opinion.

BY ADRIAN GETAZ.

On page 807 (1903) is an article by Mr. Dadant saying substantially that queen-excluders are at least useless. On page 231 (1904) is an article by Mr. Davenport holding exactly the opposite view. If the reader will look over those articles he will at once see that the bottom facts are these:

1. Mr. Dadant doesn't use excluders because his queens *don't* go and lay in the upper story.

2. Mr. Davenport uses excluders because his queens *do* go and lay in the upper story.

Now why such differences in the behavior of their queens? I think that the reason, or rather the two reasons, for such a difference can be easily "located."

1. Difference in size of brood-nest. If the reader will turn to page 152 of Langstroth Revised, he will see that a brood-nest large enough to accommodate a good queen should contain about 1700 square inches of comb. This is equivalent to 12 Langstroth frames. Now, the hives used by Mr. Davenport contain only 10 or 8 frames. That is not enough. So his queens go "up-stairs" to lay, because they have not sufficient room "down-stairs." That is one reason.

2. Difference in the depth of the frames. Every reader of this journal knows that the tendency of the bees is to build their brood-nest in a globular form, as near as possible. Now a brood-nest of 12 Langstroth frames is big enough, but it is too flat. I still have some hives of that shape but I am gradually discarding them. One reason is that very often the queen goes in the upper story to lay, and neglects the outside frames. With only 9 or 10 frames, 2 or 3 inches deeper, such thing never happens, because then the brood assumes a more nearly globular form without extending in the upper story. The reader doubtless knows that Mr. Dadant uses the Quinby frame, which is two inches deeper than the Langstroth.

I am working nearly altogether for comb honey. Another objection I found against the 12-frame hives is the too-large size of the supers to accommodate them. They are too heavy, for one thing. Furthermore, when the first super is given, the weather is not warm yet, and a super of that size is too large to give at once. There is more room than the colony can keep sufficiently warm to allow easy comb-building. As I stated in "Some Expert Opinion" column, I would rather have only 9 frames and have them deep enough to make the 1700 square inches required. Knox Co., Tenn.

⁂

Comb-Leveler—How to Make and Use.

BY G. C. GREINER.

If I should tell all I know about the comb-leveler it would make a very short story, for I know but little about it, and what little I do know is the result of my own experience and observation. Consequently the tool I use for this purpose may or may not be the ideal of others, but if effectiveness is the standard of its practicability I do not ask for anything better.

If I am not mistaken, the comb-leveler as used by some bee-keepers, works on the principle of heating or melting down combs to the desired thickness. This leaves the edges more or less seared over, and the bees are not so readily inclined to accept them. On this account I prefer my own make, which leaves the edges somewhat rough or ragged, but tender, and with little or no repairs by the bees, they are in tip-top shape to "hitch to."

During the earlier years of my bee-keeping, some 26 or 28 years ago, when the advantages of using bait-sections first appeared to me, I found it was necessary, for best results, to have all unfinished sections that were intended for next year's baits, cleaned out by the bees as soon as the honey-harvest closed. I also found that sections with capped honey, when exposed to the free access of the bees, would be nearly annihilated, unless they were previously uncapped. On account of this capped honey many times not being fully drawn out (being stored late in the season), and therefore being quite a little below the edges of the section, a common straight knife did not work to suit me. After a little experimenting I found that a comb made of fine wire-nails, just a little shorter than the inside of the short way of the section, would fill the bill to perfection.

At about the same time I learned from observation, that fully drawn combs (in thickness) even if cleaned by the bees of all the honey after the honey harvest, would not produce nice, evenly capped sections the next year. The cause of this was with most of these combs, a certain enlargement or rim at the top edge of the cells. By removing this trouble, reducing the thickness of such combs about ¼ of an inch, or a little more, from each side, so that the surface part of the combs had to be newly built, I found that in this way the appearance of such sections could be greatly improved.

This led me to make the tool, which I have used ever since, and of which an illustration is here given.

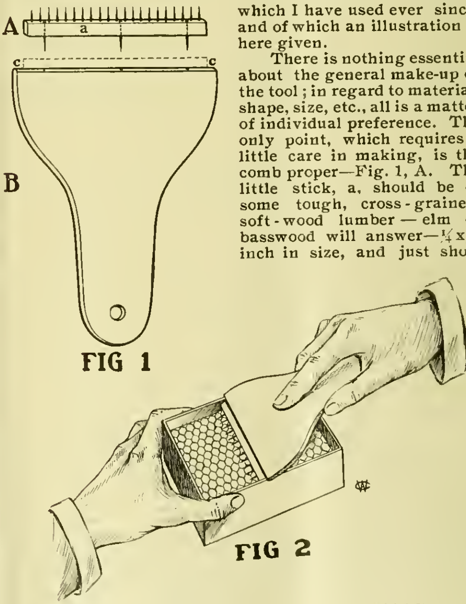

FIG 1

FIG 2

GREINER'S COMB-LEVELER FOR UNFINISHED SECTIONS.

There is nothing essential about the general make-up of the tool; in regard to material, shape, size, etc., all is a matter of individual preference. The only point, which requires a little care in making, is the comb proper—Fig. 1, A. The little stick, a, should be of some tough, cross-grained, soft-wood lumber — elm or basswood will answer—¼x½ inch in size, and just short enough to go inside of the section. This is driven full of fine 1-inch wire nails at about ¼ of an inch (or a little less) distance, after the holes have been punched with a brad-awl of just the right size. The nails should drive in as tight as possible without splitting the sticks. When completed, the comb is nailed on the handle, Fig. 1, B; this latter is a little wider than the outside of the section, leaving the notches, etc., to project and rest on the edges of the section when the tool is used. Any kind of thin lumber the same thickness as the little comb-strip, and not too soft, will do.

At Fig. 2 the comb-leveler is shown in position when in operation. It will be noticed that it is held, when drawn across the section, at an angle of about 45 degrees; this drops the points of the nails ½ inch below the edge of the section, and if used from both sides, reduces the comb to about one-half of its full thickness. By varying the pitch of the handle, the points of the nails can be raised or lowered to suit the fancy of the operator.

It requires a little experience to use the tool properly. If the temperature is too low and the combs are brittle, they are liable to break when not solidly attached at the sides.

Niagara Co., N. Y.

Double "Shook Swarms" and Comb Honey.

BY JOHN S. CALLBREATH.

SUPPOSE a bee-keeper has several yards of bees, and that the spring count is only about one-half what it was last fall. Suppose, further, that he hasn't any empty hives and yet wants to run for comb honey and practice the "shook-swarm" method. The rule has been not to hive a swarm in a hive full of comb, because the bees would store so much honey below, and, once started there, would entirely fail to do good work in the sections. Should he cut the comb out, excepting enough for a starter? That would seem like a waste. Must he then buy new hives when half of the hives he has contain no bees? That would seem wise. Of course, if he is going to run for increase, the problem would be easy enough—just keep forming nuclei and replace the combs of hatching brood with empty combs. But if he wants to run for comb honey and practice the "shook swarm" method the problem is still unsolved.

If a swarm is hived in a hive full of comb, *why* do the bees put their honey below instead of above in sections? "Because the queen can not at once fill all the cells with eggs," is the substance of the answer usually given. But, suppose all of the combs were full of eggs at the time the swarm was put in, would they all be developed into bees? No, they wouldn't. How many? Just as many as the *nurse-bees* could care for, and no more. If there were twice as many *nurse-bees*, would twice as many eggs be developed into bees? From practical experience I would say, yes. That then solves the problem: Just hive or shake *two* swarms into *one* full hive of comb, and with a *double* force of *nurse-bees* to care for *all* the eggs the queen can lay it will very soon happen that, instead of the queen being crowded for room to lay, the honey—not yet sealed over—will be *crowded out to give her room to lay.*

With a double force of field-bees to bring in honey, and a double force of nurse-bees to see to it that it goes where it belongs, the results with me have been satisfactory. In 1898, at one time, I took off from such a colony, 96 finished sections.

Sometimes *hybrids*, after a few days, will start queen-cells and swarm. The remedy for that is either not to have the hybrids, or else hive on starters.

Delaware Co., N. Y.

Removing Supers Before All Sections Are Sealed.

BY DR. C. C. MILLER.

ON page 173, D. McCarthy makes some remarks upon this subject, and is endorsed more or less fully by our genial Afterthinker, on page 297, and by S. T. Pettit, page 363. Some of the things said are excellent, but the total trend is toward the advice that in no case should the supers of sections be removed till all sections are completely finished, so long as the harvest continues.

I believe the beginner who follows that advice—and I would not blame any beginner for following the advice of such good authorities—will do so at a loss. If I had followed such advice last year, I think it would be a moderate estimate to say that the loss would have been $100.

It is said that in a rapid flow the honey is sealed before fully ripened, and generally "it's better to leave all on until the end of the season." No doubt the honey will be of better body if thus left on. A section of honey taken from the hive during a rapid flow just as soon as it is sealed, unless properly managed afterward, is in some danger of becoming watery in appearance. But although the honey itself is the better for remaining on the hive, the capping is much the worse for it. To get the top of the market, sections must be snow-white. As a rule, that's the way they are when first sealed. Soon after that is the white surface begins to be darkened—at least that is the way it is here—probably caused by the bees bringing up bits of black from the brood-comb below. If a super is left on till the corner sections are finished, the center sections will be so darkened that they must sell at a reduced price.

My good friend Pettit will have the outside sections finished the sooner by use of the dividers of his devising for holding a body of bees outside the sections; but dividers and all, the sections will be darkened if, as he suggests, they be left on until the end of the season. At least that would be the case with all the earlier supers of my honey.

It looks just a little as if Mr. Hasty's experience was different, for he says he seldom takes off honey till it's done. I wish you would tell us, Mr. Hasty, when you leave a super on till the corner sections are entirely sealed, are the central sections just as white as the outer ones? I am free to confess that every year some of my central sections are darker than I like.

You say, Mr. Hasty, that your experience is crippled, so tell us what you *think* the bees will do. Let me tell you what I *know* they will do, or at least what they have done, after having had experience of many years, not merely with a few sections, but with thousands of them. If a lot of supers are taken off during a full flow, the sections being properly separatored, and the supers filled with the unfinished sections, some of them half sealed and some less, and returned to be finished, the work will be done so nicely that a super of that kind can not be distinguished from others except by seeing the penciled "Go-back" on one of the sections. I prefer, however, to have the work done by the colonies that have made the best work at finishing sections, and not, as you say, have them "put onto the next hive that comes handy."

I cannot say how it is with others, but one of the things that I know is, that if I leave supers on till every section is fully sealed, part of the sections will be too dark to bring the highest price readily, and by taking off before all are completed and returning the unfinished ones, I can get them all to grade in the highest class.

McHenry Co., Ill.

Convention Proceedings

Report of the Convention of the New York State Bee-Keepers' Association.

REPORTED BY MORLEY PETTIT.

The New York State Bee-Keepers' Association met in Syracuse, Friday morning, Jan. 15, 1904, Pres. W. F. Marks occupying the chair.

ORGANIZATION AND CO-OPERATION.

In his opening address, the president spoke particularly on the subject of organization. The system of organization in that State is by County associations sending delegates to the State convention. This reaches every county, and enables all to attend conventions. Yet the vast majority of producers do not avail themselves of this opportunity, and are the losers thereby. He urged individual members to take a personal interest in association development and canvass for members. The United States census report had grossly misrepresented and underestimated the honey-resources of the State, which, in reality, were second to none. New York State bee-keepers had the advantage, also, said Mr. Marks, of possessing the greatest markets of the country, right within their own State. What they should do now is to make that market sure and safe by vigorously enforcing their pure honey law.

To further their own interests, New York State bee-keepers should be vigilant, active, and unselfish in promoting organization. The State should be well represented at the St. Louis Exposition. Thanks were due to Messrs. France, Hutchinson, Holtermann and Pettit for their presence and assistance at this convention.

W. Z. Hutchinson—This is the only State that has county associations which affiliate with the State Association. This is what we want in the National. Then the matter of statistics should be discussed, e. g.: Let the General Manager send out to each member return post-cards with blanks to fill out, showing crop report. He could then tabulate these reports and issue in bulletin form to members.

Mr. West—Let these cards be sent out twice—at the close of the white honey-flow, then at the close of the dark.

Mr. Pettit—We should also collect reports from the dealers as to the probable demand, then we have the relation between supply and demand, and a more even distribution of honey can be made.

Mr. Holtermann—Assessors should collect these statistics.

Mr. House—Inspectors should do it.

Upon this the inspectors present immediately protested that they had enough to do.

Mr. France said that for the Manager of the National to collect crop reports from the whole country would be expensive and unsatisfactory. For one thing, it would take so much time they would be too late when published.

Mr. N. E. France, inspector of apiaries for Wisconsin, then spoke on

DISEASES OF BEES.

This subject is one that underlies *success* in New York State. If the bees are diseased, pasture, etc., count for nothing. The subject should be divided. We have all of the inspectors of the State here now, and should be able to get at comparative differences in foul brood as found in various places; also to compare it with black brood, pickled brood, etc. One trouble is that not foul brood nor black brood, but the conditions of the season, produce pickled brood. I have not seen such a case before. Conditions were so favorable here last season that 80 percent of the apiaries were diseased, often as bad as foul brood. I was asked to go out and look over the subject, but found less foul brood and more pickled brood.

Foul brood begins first in the food of the larvæ. The circulation is affected. The little thing becomes restless, moves in agony, then straightens out and lies on its back lengthwise of the cell. It continues to grow, but the disease grows faster. The head turns black, and the tongue is thrown out. If the tongue of the bee strikes the side-wall opposite, it never lets go. When the larva dries down the tongue sticks there, and keeps the head turned up. The ropiness then appears—and the odor. The cell-capping dries down and cracks open. The larva draws up and dries down to a brown scale about where the shoulder of the bee would be. The bees can not remove this scale—it is glued fast; but they will go on and use the cell for honey, pollen, or a new larva. The germs of the disease never float in the air. If they did, all the cells in a diseased hive would be affected in the same way, but they are not.

Pickled brood is quite different. It will turn brown just the same, but the head of the bee becomes as hard as a stone, and nearly black. Instead of the lower portion of the larva flattening out, it becomes like a sack or bag. The bee is easily drawn out of the cell and is found to contain a watery fluid which is never ropy or odorous. I do not know what causes pickled brood, but it seems to be a shortage of food and heat at the proper time. A rainy, cold spell at the close of dandelion bloom is liable to produce it. The live bees must live—they feed themselves, aad then the brood, if there is any left. The brood is liable to starve and become "pickled," about the opening of clover. It is not a contagious disease, and can be prevented by feeding regularly when no honey is coming in, and keeping the hives warmly covered.

Mr. France described experiments where wax from infected combs had been made into foundation and used in many different yards uniformly without any disease resulting. The treatment of the disease is easy if you carefully follow instructions. Burning diseased combs is dangerous, because the honey will not burn, and is liable to run out on the ground and be gathered up by bees again. If you must burn, dig a hole and burn in the hole, then bury the ashes. The treatment is not so much as the man. The one who knows too much to read and attend conventions is the one I have most trouble with.

N. E. FRANCE.

Mr. Holtermann described an experiment where he melted wax at the lowest possible temperature, stirred in large quantities of foul brood "culture," and then made the wax into foundation. This foundation was used in healthy colonies, and no foul brood resulted.

Mr. Hershiser—Where an apiary is diseased is there danger of having the disase spread by extracting from super-combs where no brood has been reared?

Mr. France—For safety's sake, all extracting-combs should be treated with formalin.

Mr. Holtermann—There is danger of the diseased honey being carried up into the super.

Mr. France—Some say there is no use fighting the disease because the forest-trees are full of it. Now we find very little disease in the trees, for two reasons. A swarm may carry some diseased honey, but before there is any brood it is all consumed. Again, if they contract the disease by robbing, they soon die, and squirrels and moths make short work of the combs.

Mr. Betsinger thought that one diseased colony in a cellar would give the disease to the whole lot.

Speaking of formalin gas, Mr. France said he had found that it would not act through cappings or honey. Where the cells had been opened before fumigating, the bees would afterward clean out the dry scale, but not when in the ropy stage. There may be a difference in the drug. Hives thoroughly scraped and cleaned of honey-stains need not be disinfected.

(Continued next week.)

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

A Bit of Honey.

Just a bit of honey on the daily bread,
Just a waft of perfume on the path we tread.

Just a taste of sweetness in the bitter brew,
That is dashed too deeply with the poignant rue.

Just a winning patience when the day is long,
Just a cheery lifting of the pilgrim's song.

Just a thought of heaven; earth will soon be o'er,
Oh, the fadeless flowers on that other shore!

Just a bit of honey, in the cup we take.
Just a little sweetness in the bread we break.

MARGARET E. SANGSTER.

Results of Wintering—Loafing Bees, Etc.

DEAR SISTERS:—I want to make a "call," and say that I have found both pleasure and profit in reading the American Bee Journal—the Sisters' column, especially. I do not know another lady bee-keeper in this county, so, of course, I feel lonely.

I put into winter quarters 4 colonies—3 strong ones and 1 after-swarm of not more than a quart of bees. Such a winter! We put the hives in a shed and covered them with carpet, as they were in single-walled hives. I got uneasy, examined them in January, and found 2 colonies out of honey, and what to do I did not know, so I bought "A B C of Bee-Culture;" it told me what I desired to know about feeding. I made the entrances smaller, wrapped the hives in woolen bed-comforts (after fixing a small vessel in each), and made the old cat's bed in a super on top. They actually carried the honey into the cells when the weather was almost zero. On opening the hive in March I found brood in the weakest colony; I fed sugar syrup as soon as they could fly, and now they are a roaring colony, filling a 9-frame Langstroth hive.

One of my colonies came through the winter queenless, which I united with a strong one. I have increased to 6 colonies by division and feeding, but have had no swarms yet. I expect to make better preparations for winter next fall. Our spring has been backward and cold, but raspberries and white clover are blooming now, so I expect to stop feeding.

Reading "A B C of Bee-Culture" gave me a worse case of bee-fever, and made me ashamed of my ignorance. I sent for a sample copy of the American Bee Journal. The next day after the sample copy arrived my subscription went in for a year. I also got "Bees and Honey," which I found very helpful.

One of my neighbors sent for me last week to come and transfer a colony of bees out of an old pine box into an empty hive, as all the comb he could see was full of "worms." I went, expecting to find a weak colony, riddled by moths. Imagine my surprise to find one of the strongest colonies of Italians I ever saw, chock-full of brood and honey, and lying out in front in a cluster as large as a pint cup! He finally consented (but with a doubtful mind) for me to block the comb full of *worms* (brood), and fit in frames in the new hive. Imagine, sisters, of throwing away enough brood to fill 16 Langstroth frames!

One question, please, and then I will go: Last summer one of our colonies refused to store honey in a super—I even put 2 frames of honey "up-stairs" to coax them, but they simply would not do *anything* but loaf. Can you tell me why?

Success to the sisters, and the dear old Journal.

Monroe Co., W. Va. MRS. ANNA PARKER.

There may have been various reasons why those bees would not work. There may have been no nectar for them to get. Sometimes bloom is abundant and no nectar. The probability is, however, that other colonies were storing at the time that those bees were doing nothing. They may have been too weak to work in a super, or they may have been queenless. Queenless bees are more apt to loaf. If thwarted by any means in their preparations for swarming, it may make them sulk and loaf.

Comments, Queenlessness, Yellow Sweet Clover.

We have had some strong articles in the American Bee Journal lately. There were Messrs. Townsend and Doolittle, both well equipped to give a reason for the faith that is in them. As it happens, I am capable of appreciating the articles of both gentlemen, because I have a small out-apiary run each year with a decreasing amount of attention, and paying well for what little it gets, while the home apiary is run after the manner of Mr. Doolittle—how far *after* of course I can not tell. I find Dr. Miller's comments most pertinent, and think he has not left very much to be said.

As I understand it, it is a pleasure for Mr. Doolittle to be in close touch with the bees; also, as a professional queen-breeder, it is essential that he do more "fussing" than is needed when one aims simply to push honey-gathering to the utmost, as most of us wish to do. While we may be of the "fussy" order at the start, we become content to dispense with whatever we think non-essential to success, and leave the fussing to the beginner who enjoys a sense of mastery over his bees, and delights in his own bravery.

Then, as Mr. Townsend has pointed out, few of us can make manipulation pay as Mr. Doolittle does. This matter is analogous to another. There are plenty of people who can be good agriculturists. They can be corn and stock men, and make money at it, as many of them do here in the West, but they have not the patience and skill to be horticulturists. Rarely we have a Kellogg or a Burbank. There is room enough for both classes, but the rank and file must be the *general* rather than the *special*.

I call Mr. Rickett's article a strong one, too. Bee-keepers, as well as others, need to be reminded that there are two sides to a question. Those who have been writing on the heinousness of invading another's field could hardly have had such cases as these in mind, but rather the villain who, having no intrenched interests, deliberately comes to rival another. It surely is bad policy for some one to bring a large number of bees where there are already enough to glean the field. I think we err in urging so much the injury he is doing to his neighbor—we want to show him that it *will not pay*. Selfishness (really "the struggle for existence" which brings about "the survival of the fittest") is inherent in human nature, and must be met on its own ground. It seems a pity when so much nectar goes to waste, that there should be crowding in particular fields, but that is the way of the world.

Mr. Hasty, I hope you succeeded in helping the somewhat jaundiced vision of the man with the tree. You have my sympathy, but, after all, poor "Nebraska" caught it really worse than you did, and made no comment, presumably lest what was a little harmless pleasantry might grow to be unpleasant, or at least become "much ado about nothing."

I see from Miss Wilson's remarks about queenlessness that I am not the only one who has suffered in that respect. I found 3 queenless colonies in 21, which represents my winter loss. Not having a record of the queens, I can not tell if they were *old* or *young*. I tell that by the queen's wings, as I do not clip until the second season; but when they are gone I can not tell. If I knew they were old queens I would be thinking that I am in error in leaving requeening pretty much to the bees themselves. Will Miss Wilson or Dr. Miller kindly say something on that head? I believe it is a matter where the masters of the craft are not agreed.

With the above exception I can report my colonies strong. We have had a very lavish blossoming of the fruit-trees, and now yellow sweet clover is just coming into bloom. MRS. A. L. AMOS.

Custer Co., Nebr.

Mrs. Amos, in her very interesting letter, expresses a desire to know whether the queens she lost this spring were lost because they were old. Probably that had little to do with the matter. Other things being equal, an old queen is more likely to die than a young one, but we have had queens doing excellent work when four years old, and the loss of queens the past spring was not only of those hoary with age, but of those reared last year as well. If Mrs. Amos will try keeping a record-book in which not only a record of the age of the queen is kept, but a record of the quality of her bees as honey-gatherers as well, I believe she will find it much more satisfactory.

We have a fashion of laying all the *good* or *bad* qualities of the bees to the queen. So if the bees of a colony fail to do good work as honey-gatherers, are very cross or objectionable in any way, other things being equal, the head of their queen is in some danger.

Will Mrs. Amos kindly tell us a little more about yellow sweet clover? Its time of blooming in her locality is the last of May. Now, how does that compare with the time of white clover? How much earlier is it than white sweet clover? Is the honey from the yellow of the same flavor and color as from the white? Has it any advantage over the white except as to the time of blooming? How about the yellow as a plant for fodder?

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

TEACHING BEES TO STEAL.

Whether or not it is possible for bees to steal in the strict application of the term, they undoubtedly go where they are not wanted and carry off property which the proprietors wish to have left alone—and they can be trained to do it when they don't see the opportunity themselves. We may imagine barrels of moist sugar with jammed and broken staves, and standing in a warehouse with broken windows. Bees would not go in the broken windows till they are taught; but once having learned the lesson they would carry off considerable property. If the Enoch on page 339 got so far from the righteousness of the other Enoch as to start his bees at doing this, his wrong-doing is punishable. But most likely some neighbors and he have been quarreling, and they are trying to manufacture a case against him. Such a case would be rather unique, although I believe Scotland once had a famous case in which a man taught an intelligent dog to steal and drive off the sheep of distant flocks.

EXPERIMENTS WITH HONEY-PLANTS.

That Plant-Introducing Station, which Uncle Sam is starting at Chico, Calif., is likely to be an important institution. Bee-folks would do well to seize the opportunity and get Prof. Dorsett interested in honey-plants before he gets so many things on his list of plants for trial that he can't possibly take any more. Page 340.

THE USE OF QUEEN-EXCLUDERS.

The queen-excluder gets more negatives than I wish it did when the experts vote on it. In favor there are 16, and opposed 11. S. T. Pettit brings out a somewhat novel idea. He thinks it very desirable to keep the *drones* out of the supers. If he would explain more fully the *why* of this perhaps we would be edified. C. H. Dibbern has a reason for excluders under the sections, which one rather has to admit is valid as far as it goes. Bees will not run back and forth with dirty wax pinched off the brood-combs if there is an excluder to crawl through—and the sections will be decidedly the whiter for it. Page 340.

STOVE-PIPE SHELF FOR RELIQUEFYING HONEY.

Stove-pipe shelf as a place to reliquefy honey which is in glass—says G. C. Greiner. Thanks for the idea. Some might ask for a more wholesale method. Some people fire their stoves in such a reckless manner as to get a pipe red-hot, or nearly so, occasionally. I wonder whether there is a possibility of cracking the glasses. Page 341.

DOOLITTLE THE LEADER IN QUEEN-FINDING.

So Doolittle finds the queen 24 times out of 25 in once carefully looking over the combs. 'Spects some of us will have to practice a bit before we can quite reach those figures. Page 342.

DRONES AND SWARMING.

My afterthinker does get in bad order sometimes; but, dear Dr. Miller, your "logical inference" also seems to have gotten in bad order one time. As to drones the night after swarming, I was not carrying (at least was not trying to carry) the idea that that was anything more than a minute point. If we see that in some minute point weeds are beneficial, it's not a logical inference that they ought therefore to be allowed to cover several square rods of the garden. Not logical to make ten dollars of concession to ten cents of motive thereto.

"When a swarm issues, a number of workers is detailed," eh? I incline to kick like a mule about any bees being detailed to stay at home. Wholly fortuitous. The home bees comprise a number of very variable sections. Oft lots of them—sometimes only a few—get left by being off in the fields. Oft lots of them—sometimes only a few—feel as the Children of Israel did after they had chosen Saul—and come back from the swarm. More or less of them get all the excitement they want by running about on the combs and every available place—if they can squeeze into the super so many the more will be likely to stay. Usually quite a large company have never flown yet. The more part of these, but not all, essay a rather premature flight with the swarm. Bees of a group that are particularly interested in a particular queen-cell (I imagine) rally around a little and finally settle down by staying at home. And what other sections there may be don't occur to me just at this minute—but no section of details—kicks the mule. Page 344.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Swarming Experiences.

1. This spring I commenced handling the bees to prevent swarming, so I handled every frame of 65 hives, cut out all queen-cells and drone-brood. Was it the proper thing to do?

2. All went well for awhile, 16 days I think, then I was busy and could not go through them again; my bees commenced to swarm, so I watched them from 10 until 2 o'clock, and I put back every single swarm. That worked well for a few days, when they commenced in earnest one day. I was hiving a prime swarm and four more swarms came out and all came over to that one. I gave them three hive-bodies and one super. I examined them the third day and I set off the hive-body, as I thought there was plenty for one hive, set it down beside the bottom one. The next day they left. What part of 5 swarms went I could not say, but the rest stayed, and are working well. Is it a common thing for bees to go together when swarming at the same time? It is the case with mine this season. I have had a number of instances where three swarms went together at one time. I divided the three swarms and gave to the three hives where they came from. All did well. Now I put two prime swarms together and put all after-swarms back.

3. I had 5 swarms to-day (May 20)—4 prime and one after-swarm which left with one of the prime swarms. I hived them in two hives with supers on top. Is that the proper way to handle them, under such circumstances?

4. Here is another experience: I had 4 swarms that went together; I hived one, and the second day I divided them. I thought after a day one colony did not have a queen, so I went to one of the hives that one of the swarms came out of. and found a queen-cell just ready to be uncapped. I cut it out and uncapped it, and a young queen popped out. I gave her some honey, kept her over night, then gave her to the swarm that had no queen. All is well with them.

I had two after-swarms enter two other hives where the bees were not in the swarming mood; they killed every one of them. So it seems that when they are in the swarming mood they will mix up in any shape.

I suppose my bees are all blacks as I have never bought a queen. Upon examination I found 2 queenless colonies which I mixed up with new swarms. I cannot find a queen in the hive. Can you tell me how to find them?

5. My apiary is on a bluff 60 feet high, where the wind blows strong every afternoon. Would it be better to set them down on the low land? CALIFORNIA.

ANSWERS.—1. Hardly; continuous cutting out of cells will not prevent swarming, and it does little good to cut out drone-comb unless you patch the holes with worker-comb, for the bees are likely to fill the holes with drone-comb again.

2. Yes, it is quite common for two or more swarms to unite. Some have had as many as half a dozen unite in one immense cluster, or go into the same hive.

3. If I understand you correctly, the after-swarm united with one of the prime swarms and absconded; then you hived the remaining three swarms in two hives with supers on top. Making two colonies of the three would give you strong forces for surplus work, making it a good thing if you didn't want the increase; putting on supers at once was a good thing because giving abundance of room, which is quite important when a swarm is first hived. But there is one objection to giving a super when a swarm is first hived, unless a queen-excluder is used; the queen may go up and establish the brood-nest in the super. It is not a bad plan to put an empty hive-body under a newly-hived swarm to give it extra room, taking it away after two or three days.

4. After a little experience you will probably not have much difficulty in finding a queen by looking over the frames. Use as little smoke as possible, for there isn't much hope of finding a queen after you have set the bees to running by using too much smoke. She will generally be found on the brood. Take the frame, or the two frames, nearest you out of the hive, and look over the other frames in succession. As you lift out each frame, glance at the exposed side of the next frame in the hive. Then look at the farther side of the frame in your hand, then the near side, and so on. If you don't find the queen after looking over the combs once or twice, better close the hive and try it half an hour later, or some other time. You may screen out the queen by making the bees pass through excluder-zinc.

5. I don't know. If it's hot on the low land, and you find no harm that the wind does, may be it's all right on the bluff. If the wind is so strong as to beat down the bees, that makes the bluff objectionable, and in any case it is easier for a bee with a heavy load to make the lower place.

Play-Spell of Young Bees—Colorado vs. Other Places—Carno-Italian Cross.

1. On a warm afternoon the bees crowd around the entrance of the hive, almost clogging it full. Some of the bees crawl up the front of the hive, take wing and fly back to the entrance of the hive and go in. Some of them crawl up the front of the hive and fly away. A few take wing from the entrance and after circling back and forth in front of the hive fly away. Why is this?

2. Do you think there is any difference between a dry climate, like Colorado, or a wet Eastern climate, for bees?

3. How is a cross between Carniolan and Italian bees for honey? COLORADO.

ANSWERS.—1. The young bees are taking their play-spell and at the same time marking their location. You will notice that at first they fly with their heads toward the hive.

2. Yes, there is a difference; but either one may be a good or a poor location for bees.

3. I know nothing about them from experience, but some speak of them highly.

Extractor for Unfinished Sections.

I read in the American Bee Journal, some time last winter, of some one who had invented an extractor for unfinished sections. Please tell me how or where I can get one. I have mislaid the Journal that had the article in. ILLINOIS.

ANSWER.—There is probably no extractor made for extracting sections alone, although any extractor can be used for that purpose. Make a wire basket or pocket, using coarse wire, and put the sections in. Possibly you may obtain from supply-dealers such a basket ready-made.

All Thick-Top-Bar Staple-Spaced Frames Not Miller Frames.

On page 173, John P. Coburn says: "Don't all supply-dealers advertise thick-top-bar staple spaced brood-frames? Are they not practically Miller frames? The only difference is that Miller uses a nail instead of a staple."

I think, Mr. Coburn, you will find an essential difference between the two frames. Nails could be used instead of staples in any of the staple-spaced frames, but it wouldn't make them Miller frames. The Miller frame has top-bar, end-bars, and bottom-bar all of the same width, 1⅛ inches. I know of no frame listed that has this feature, and I count it of some importance. It prevents the building of comb

FIRE SMOKED US OUT!

We got pretty badly smoked in a fire in the power-house in which we're located. Water damaged our stock-room to quite an extent.... But the insurance companies made good on it....So we're going to give our customers the benefit of it.

400,000 SECTIONS SMOKED UP.

They were all crated and the edges only were discolored. We'll let them go for less than half while they last. Crates hold 500. We won't break a crate. $2.25 a thousand; $1.15 a crate. Sections are 1½, 1¾, and 1⅞ inches.

Smokers of every sort slightly discolored by smoke—one-third off.

A number of Extractors were smoked up. All they'll need is a good scouring. They'll go for one-third off.

Many Hives were smoked a little—they'll go for one-third off while they last. Better write **to-day.**

MINNESOTA BEE-KEEPERS' SUPPLY CO., Minneapolis, Minn.

between bottom-bars and end-bars. The bottom-bar of the Miller frame is in two parts, which lends itself to the plan of having foundation with splints built down solid to the bottom-bar. If you know of any catalog that has thick-top-bar staple-spaced frames with these features, I should be much obliged if you will give me the name.

Combs Built Crisscross—Introducing Queens.

1. I bought a colony of bees in a 10-frame Langstroth hive, with the bottom-board nailed fast. I want to Italianize them, but I find the combs built diagonally, so I cannot get the frames out. What is the best way to proceed? The colony cast a swarm just before I got them.

2. How would it do, in introducing a strange queen, to shake the bees in front of the hive and let the new queen run in with the bees, after cutting out all cells? Will it be safe? KENTUCKY.

ANSWERS.—1. Cut away the attachments of the combs to the sides of the hive with a long-bladed knife. Likely you haven't such a knife as it would require a blade 10 inches long. A hand-saw will do very well. Now turn the hive upside down, dumping it up and down if necessary, and lift the hive off the now inverted frames. You can then cut away at the frames to your heart's content. Possibly the combs, at least some of them, are so nearly straight that by a little cutting you can crowd them correctly into their frames. If the work is done 21 days after the time the prime swarm was cast, there will be no worker-brood in the way, and if the combs are too crooked it is possible that the best thing may be to melt up the combs.

2. If the colony has been queenless two or more days, and if honey is coming in freely, it is pretty safe, but a little risky for a valuable queen.

Keeping Last Year's Comb Honey.

1. I have 40 shipping-cases filled with a fine quality of clover honey of last year's production, left over. Please advise me what to do with it? Shall I sell it if I can get $2.40 per case, or would you advise me to hold it over until the present season is ended?

2. If the latter, how can I keep it from moth, or wax-worms? I have a large box made of matched pine flooring that is very tightly fitted together, so that moth cannot get into it. If kept in a dry shop this summer in that box, would it be likely to sweat or spoil in any way so long as so kept? IOWA.

ANSWERS.—1. It is a hard matter to advise without knowing your market, especially your home market. The probability is that $2.40 per case of 24 pounds will be better than to keep it over with the risk of granulation.

2. If it is entirely free from worms now, putting it where no moth can enter will keep it safe on that score, and kept as you mention there should be no harm befall it except granulation. If any worms are present now, treat with bisulphide of carbon, or sulphur, and again two or three weeks later, and if then confined where moths can not enter, it should not be further troubled in that way.

Perhaps a Queenless Colony.

I have only 1 colony, and there is not a particle of honey nor a single cell of brood in the hive. The bottom-board was nailed to the hive, and I tore it off yesterday and found quite a number of wax-worms and a lot of refuse on the bottom-board. The comb seems to be all right, and there is a fair number of bees in the hive. About 15 days ago I placed an Alley queen and drone trap at the entrance of the hive and caught quite a number of drones. Does a fertile queen come out of the hive at other times than when they swarm? You see that I am thinking that I may have caught the queen in that trap. When I get the queen, would I better put the bees on foundation, or on the combs in the old hive? The combs may be diseased, although they appear all right. MISSOURI.

ANSWER.—The probability is that a colony is queenless if it has no brood at this time of the year. If so, it is doomed unless it has help. It may be, however, that a young queen is in the hive, and has not yet begun to lay. If you can secure a piece of brood and give to it, it will start queen-cells if no queen is in the hive. You can then get a queen and give to it, if you think there is population enough to be worth saving. Of course, food must be given if it can not gather enough for its daily needs.

A fertile queen does not leave the hive except when swarming. Even if she did, there would still be sealed brood after only 15 days.

The combs are very likely all right.

Swarming Questions.

1. In putting a hive on top of one where the bees died last winter, will the bees swarm as soon as if in single hive? Will they store honey in the lower hive if left that way? Will the queen lay in the lower story, or will she always stay in the original brood-chamber?

2. After the first swarm leaves the hive, and I desire no more swarms from that hive, will I have to cut out all queen-cells, or must I leave one?

3. Has the queen hatched and left her cell when the first swarm leaves?

4. If a swarm issues now, will *it* cast a swarm this year, if the first new swarm is hived on full sheets of foundation? MICHIGAN.

ANSWERS.—1. If the two stories are left, the bees will not swarm so certainly or so soon as with only one story. If a story of combs is put under a colony for the bees to take care of, the empty story is usually taken away before storing begins, when working for comb honey. If the two stories are left, the brood-nest will in most cases be extended into the lower story before any brood is there.

If working for extracted honey, you can put the queen in the lower story at the beginning of the harvest, putting a queen-excluder between the two stories, and there will be no swarming in the experience of some, but others say it is not a sure preventive.

2. One must be left, or you will have a queenless colony.

3. The young queen emerges from her cell a week or so after the issuing of the first swarm.

4. Generally not, although it sometimes happens, such a swarm being called a "virgin" swarm.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get them subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.

FROM MANY FIELDS

Season in Florida.

The season was cold until June. There was a warm spell during March, with bees swarming. We have the whitest honey I have seen for years.
D. J. PAWLETTA.
Columbia Co., Fla., June 7.

Southern California Crop Prospects.

The honey crop of Southern California will not worry the Eastern producers *this* year, it being almost a failure. Some of our largest producers are already feeding their colonies to try to save them. Notwithstanding this well-known fact, there appears occasionally in our daily papers the old story of how much honey is on hand in Southern California, and that low prices will prevail.

Somebody keeps putting out these market reports, evidently hoping the small producers will swallow the bait and rush in their stock if they have any. One of our largest producers has nearly 50 tons of extracted honey from last season, and is holding it for 7 cents, f.o.b., and perhaps more. He will get his price before the season is over.

It will take eternal vigilance on the part of the Honey-Producers' Association to prevent the glucose fiend from getting in his work this season.
R. H. LYMAN.
Los Angeles Co., Calif., June 4.

Heavy Winter Loss of Bees.

There are not as many bee-keepers here now as last year. Quite a number lost all they had. Fully 75 percent of all the bees have gone to their "happy hunting grounds."

I have taken the American Bee Journal for over 10 years, and should not know how to get along without it.
HENRY SUTHERLAND.
Berrien Co., Mich., June 8.

Severe Winter—Home-Made Hives.

As the winter here was very severe many bees died, and many that lived are very weak, but some are still strong and doing nicely.

I was quite lucky, and did not lose as large a percentage of my bees as many other bee-keepers in this vicinity, and at this time I have bees working in their super.

When I first worked among the bees I was troubled by their being very cross, so cross, even, that one could not go at all near their hives, and many bees of other bee-keepers I find the same, but this year I am over this trouble to such an extent that I open the hives and work among them largely without veil, smoker or gloves. I found that I was the one that was to blame, and not the bees. I happened to be in the yard of a fellow bee-keeper, and noticed that although he opened the hives and did about as he had a mind to, the bees kept just as still as kittens fondled by their mother. I asked him how he managed to keep his bees so tame, and it did not take him long to make me understand, and this year, as I said, I have no trouble in performing the same feat.

The remedy is simply this: Be very calm and moderate in your actions, and use the smoker but very little, so as not to give the bees the impression that you are after all their hives and stores, for, if you do, they will give you to understand that they got there first, and mean to stay until the last.

I see, on page 347, that a certain subscriber seems to doubt my statement made on page 283, in regard to making my own hives, as he says he had found it costs more than to buy them at a factory.

Now, I consider it needless to give my figures again, but they were the exact cost of the material that I used, and the lumber was good and sound, and not the sappy stock that one is apt to get in ready-made hives, which must be painted before getting wet or else

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GUS. DITTMER, Augusta, Wis.
Please mention Bee Journal when writing.

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Untested	$ .75	$4.00	$7.50	$ .60	$3.25	$ 6.00
Select	1.00	5.00	9.00	.75	4.25	8.00
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Select Breeders						$3.00 each

Send for Circular.
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Italian Queens secured by a cross and years of careful selection from Red Clover Queens and Superior Stock obtained of W. Z. Hutchinson. I can furnish large, vigorous Untested Queens at 75 cents; after June 15, 60c. Tested Queens, $1.00; after June 15, 75c. Write for discount on large orders.
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Take Notice That the New Century Queen-Rearing Co. will have 1000 Queens ready for the mail by April 20. Tested, $1.00; Untested, 75c; 5 for $3.25; 10 for $6.00. Prices on larger quantities and Nuclei given on application. "Prompt service; fair treatment" is our motto.
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via the Nickel Plate Road, at one fare for the round-trip, plus 25 cents, July 2d, 3d and 4th, within a radius of 200 miles from starting point. Return limit July 5th. Three daily trains in each direction, with modern coaches and vestibuled sleeping-cars, to Cleveland, Erie, Buffalo, New York, Boston and New England points. Passengers to points east of Buffalo have privilege of stopover at Niagara Falls, in either direction, and also at Chautauqua Lake, during excursion season, by depositing tickets. Individual American Club Meals, ranging in price from 35c. to $1.00, served in Nickel Plate dining-cars; also service a la carte. No excess fare charged on any train on the Nickel Plate Road. Chicago Depot, corner La Salle and Van Buren Sts.; the only depot in Chicago on the Elevated Loop. City ticket offices, 111 Adams St. and Auditorium Annex. Telephones, Central 2057 and Harrison 2208. 10—24A4t

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As has been our custom heretofore we offer to mail a fine, Untested Italian Queen to the person who complies with the following conditions, all of which must be strictly followed:
1. The sender of a new subscriber must have his or her own subscription paid in advance at least to the end of this year (1904).
2. Sending your own name with the $1.00 for the Bee Journal will not entitle you to a Queen as a premium. The sender must be already a paid-in-advance subscriber as above, and the new subscriber must be a NEW subscriber; which means, further, that the new subscriber has never had the Bee Journal regularly, or at least not for a whole year previous to his name being sent in as a new one; and, also, the new subscriber must not be a member of the same family where the Bee Journal is already being taken.
We think we have made the foregoing sufficiently plain so that no error need be made. Our Premium Queens are too valuable to throw away—they must be earned in a legitimate way. They are worth working for.
We will book the orders as they come in and the Queens will be mailed in May or June. Will you have one or more?
If you cannot get a new subscriber, and want one of these Queens, we will send the American Bee Journal a year and the Queen—both for only $1.50. Address,
GEORGE W. YORK & CO., CHICAGO, ILL.

have a warped hive. From what this bee-keeper says, there is not a carpenter in the whole State of Illinois that can make a hive without spoiling the lumber, and, as he says, "not half cut," whatever that means.

Now, he is not speaking very well of the carpenters in Illinois, and I do not wonder, if things are in such a condition all through those western States, that we here in the East are told to go west where we would be in great demand, for if an apprentice who had worked at the carpenter trade six months here could not make a bee-hive as good as those made by manufacturers, he would be discharged in short order.

He further states that "the men who run bee-hive factories are at a big expense for machinery," and they also pay big wages to experts to handle stock and machinery. I do not know how much of an expert it takes to handle boards or box-machinery, but I do not feel myself obliged to trade with every man who comes along, just because he has placed himself in my way, and has an "ax to grind."

W. W. Jacobs.

Middlesex Co., Mass., June 1.

Peiro's Propolis Porous Plaster.

Here are directions for preparing the best "porous plaster" extant—the very thing bee-keepers will certainly appreciate—at least those who are suffering from lumbago, lame backs, from muscular rheumatism, sprains, etc.:

To a half teacupful of propolis (bee-glue) add just enough turpentine (a teaspoonful is enough) to soften the propolis into a thick paste by stirring well. Have a thick piece of cotton cloth—drilling or bed-ticking—into which several small holes have been snipped with the scissors, lay the cloth on any firm base, table, box or other handy foundation; take a table-knife and evenly spread the propolis as if buttering your bread. This done, apply it firmly to the small of the back, where the pain is most intense—where the "crick" catches you on bending. Or, if your side or chest hurts you—indeed, anywhere where pain is great, apply this porous plaster, and that pain will depart in short notice.

It can be left on as long as necessary.

"It sticketh like a brother."

If the propolis is made very thin with turpentine, and kept in a bottle for ready use, it will prove its worth in gold on cuts, bruises, felons, boils, etc. Indeed, it should prove a household treasure in every bee-keeper's family.

Dr. Peiro.

More Heavy Winter Loses.

Last year there were quite a number that kept bees here, but I am sorry to say that the hum of the bees now is very faint. I have one colony left out of 13 that went into winter quarters in good shape, but the winter was too severe; the cold weather was so steady that the bees had no chance to move their cluster, and so finally starved to death with lots of honey in the hive. The bees that survived have very little chance to build up, on account of the continued cool weather.

We are living in the "famous fruit-belt" of Michigan. The fruit-growers missed the bees during the blossoming season. The loss of bees here was an average of about 90 percent.

H. P. Heinlen.

Berrien Co., Mich., June 10.

Spring Report—A Bee-Cellar.

The past winter was both long and severe here in northern Minnesota. I put 10 colonies of bees in the cellar Nov. 14 and took them out April 26. This was the first suitable day for bees to fly freely since Nov. 1.

Nine of my colonies were in excellent condition, and the other one very weak. We had two weeks of warm weather following that first good day, and the bees improved it to the utmost. My best colonies soon had 12 frames of brood.

There are not many bees kept in the county. One of my neighbors had 7 colonies which wintered all right; another neighbor lost 4 out of 7. They were kept in a house-cellar warmed by a furnace, but not in the same room with the furnace. The honey in the four

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Beauty and utility. None better.
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Golden Italians, Red Clover and Carniolan Queens, Untested, during June, 1, 75c.; 6, $4.00; 12, $7.50.
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hives lost, granulated so hard that the bees could not live on it. It was the best clover and basswood. Can Dr. Miller explain this?

My bee-cellar is a pit dug in a gravel hillside, about 6 feet square, and 6 feet deep. The sides are held up by posts set close together. The hives are set on stringers a foot from the bottom. Above the hives a rough floor is laid. The space above is filled with sacks containing forest leaves. The roof was made of common boards with lath battens. It projects about 6 inches above the ground and has a slope to correspond with that of the hillside. A small ventilating shaft comes up from the bottom at the lower side of roof. In this hangs a thermometer which can be examined at any time desired. There is a small trap-door just over the ventilator. Over this door is set a box having no top or bottom. This box is just large enough to hold 4 gunnysacks filled with leaves. By this means a slow, steady ventilation is maintained all winter. Around this box the roof is well covered with leaves and hay, and extends some 10 feet back from the roof on all sides to keep frost from going down about the sides of the cellar. The temperature on Nov. 14 was 40 degrees; soon afterwards snow came and the temperature rose to 42 degrees. During the coldest weather it dropped to 38 degrees, remaining between these points the entire 165 days the bees were in the cellar. I did not open the cellar to examine them until March 31. A change of 70 degrees in the outside temperature never made more than 2 degrees difference in the cellar. The cash outlay for this cellar was just $1.00.

White clover is abundant, and basswood buds have started. I hope for a good season.

Decker Co., Minn., June 8. F. L. Day.

A Report—Transferring Bees.

At last I am going to tell you about some queens I purchased. They were tested, and are hatching, each having nearly 5 Langstroth frames full of brood. The bees are very light striped.

I told you I was going to transfer two colonies from box-hives into hives with movable frames; I divided the bees, put them in 4 hives, put the new queens in their cages 24 hours, and then set them free. I did not look at them for 3 days, to see what they were doing, but they were all right the other day,

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5A26t Please mention the Bee Journal.

July 8th
The Nickel Plate Road will run an excursion to Chautauqua Lake and return at one fare for the round-trip from Chicago, with return limit of August 9th, by depositing ticket. Transportation good on any of our three daily trains. Cheap rates to other eastern points. No excess fare charged on any train on Nickel Plate Road. Individual Club Meals, ranging in price from 35c. to $1.00; also service a la carte, in Nickel Plate dining-cars. Write John Y. Calahan, General Agent, 113 Adams St., Room 298, Chicago, for particulars. Chicago city ticket offices, 111 Adams St. and Auditorium Annex. Telephones 2057 and Harrison 2208. 11—24A4t

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And the West
At Root's Factory Prices.
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We are centrally located, and have every facility for handling business with dispatch, and our shipping facilities are the best.
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565 & 567 W. SEVENTH ST. DES MOINES, IOWA
15A12t Please mention the Bee Journal.

Send for Our 1904 Catalog and Price-List.
OUR HIVES AND SECTIONS
Are Perfect in Workmanship and Material.
By sending in your order NOW, you will SAVE MONEY, and secure prompt shipment.
PAGE & LYON MFG. CO., New London, Wis. U.S.A.
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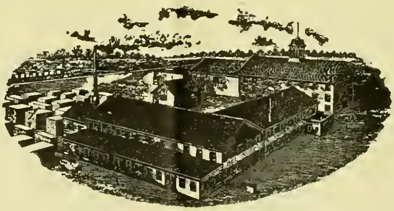

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Complete Line of LEWIS' SUPPLIES, at Factory Prices.
QUEENS AND NUCLEI Beyond Comparison.
SEND FOR CATALOG
THE FRED W. MUTH CO.,
51 Walnut Street, Cincinnati, Ohio.

and doing good work. I have one dark queen that has more brood than they have, and several that have not as much. I transferred the bees from 3 boxes this spring, but one colony was not strong enough to divide. Those that I transferred had brood enough to fill 5-Langstroth frames to a hive, and enough honey in the combs to put two more to a hive. I feel proud of my work and my queens.

I am 21 years old, and am in hopes I will become a bee-keeper. I make my own hives, and they are all 10-frames—no toys—with supers to hold as much as the brood-chamber.

I used sticks to hold the comb in the frames when transferring. I think they are better than wires; they were ready to take off in a week. The sticks must be longer than the frame is wide or high, so as to cut notches and tie them on. It is the work for two to transfer, and a job you cannot hurry.

Roy A. Boutwell.

Monona Co., Iowa, June 10.

CONVENTION NOTICE.

Texas.—The Texas State Bee-Keepers' Association will meet at College Station, Tex., Tuesday, Wednesday and Thursday, July 5, 6 and 7, 1904, beginning at 10 a.m. on Tuesday. This will be during the meeting of the Texas Farmers' Congress, so it will be a great time. Railroad rates and board will be cheap.

The convention will open at the time named. Come early and take part.

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50 or more colonies of **BROWN BEES** in Langstroth-Simplicity hives, made of dressed cypress and painted, with Langstroth frames—all standard size. Will take $3.00 per strong colony as they stand. Address for information,

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AUG. LOTZ & SON,
24A17t CADOTT, WIS.
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LOSS BY LICE

on poultry amounts to many times the cost of Lambert's Death to Lice—the sure preventive. All loss can be saved and more profit made by the use of this famous powder. It frees setting hens from these pests without harming eggs or chicks. A trial box 10c will prove it. 100 oz., by express, $1.00. "Pocket Book Pointers" free

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When you run short of Honey to supply your local trade, write to us for prices. We offer it in 60-pound tin cans, 2 cans in a box. Purity guaranteed. We pay cash for pure Beeswax. Price quoted on application. Address,

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Choice home-bred and Select Imported Stock. All Queens reared in full colonies.

One Untested Queen.....$. 90
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" Comb Nucleus (no Queen)............ 1.10

All grades ready now. Safe arrival guaranteed.

For prices on quantities and description of each grade of Queens, send for free Price-List.

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Catalog for the asking.
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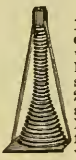
Queen-Clipping Device Free!



The Monette Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. It is used by many bee-keepers. Full printed directions sent with each one. We mail it for 25 cents; or will send it FREE as a premium for sending us One New subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,

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—and are ready to do business. Write us for leaflet showing our special Hives and prices. It is the greatest bargain you ever saw.

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WANTED! FANCY COMB HONEY
In no-drip shipping-cases. Also Amber Extracted in barrels or cans. Quote your best price delivered Cincinnati. The Fred W. Muth Co.
32Atf Front and Walnut, Cincinnati, Ohio
Please mention Bee Journal when writing.

HONEY AND BEESWAX

MARKET QUOTATIONS

Chicago, May 9.—The market has an over-supply of comb honey, very little of which will pass as No. 1 grade—price is 11@12c per pound, and off grades at a corresponding value. Extracted, 6@7c per pound for best grades of white; amber colors, 5@6c per pound. Beeswax, 30@32c. R. A. Burnett & Co.

Cincinnati, O., June 7.—Since warm weather set in, hardly any sales of comb honey are made; what little there was sold, was fancy white and brought from 12½@13½c. Extracted has a fair demand, as follows: Amber, in barrels, from 5¼@5¾c; in cans, ½c per pound more; alfalfa, 6½c; fancy white clover, 7½c. Nice yellow beeswax, 30c. C. H. W. Weber.

Albany, N. Y., June 3.—The honey market is very dull now, and prices nominal. Receipts are very light and demand the same. We quote comb honey, in good order, white, 13@15c; mixed, 12@13c; dark, 10@12c. Extracted, buckwheat, 5½@6c; mixed, 5½@6c; white, 6½@7c. Beeswax, 30@32c. H. R. Wright.

Cincinnati, June 15.—The demand for honey is slow for this season of the year, which is due to the vast quantities that were held over from last season, and the importation of Cuban honey. We quote amber in barrels and cans at 5¼@6½c; white clover, 6½@8c Beeswax, 30c.
The Fred W. Muth Co.

Boston, May 14.—The demand for honey is extremely light, almost nothing, and supplies are heavy for this time of the year, and our prices therefore are largely nominal. We quote fancy white at 15@16c; A No. 1, 14@15c; and No. 1, 14c, with no call for under grades. Extracted, from 6@7c. Blake, Scott & Lee.

Kansas City, June 15.—The market is about cleaned up on old honey, the last selling for $2.75 per case. We expect our first shipment of new stock in next week, and will sell same at $3.25 per case; we have been receiving letters from all of our honey-shippers, from which we gather that the crop in Iowa and Missouri runs from fair to good. Old extracted honey meets with very slow sale. Beeswax in good demand at 30c. C. C. Clemons & Co.

New York, May 21.—The market on comb honey is decidedly dull and it is almost impossible to move large blocks. What little trade there is, is done in a small way. We quote nominally: Fancy white at 13c; No. 1 at 12c, and amber at 10c; no demand for dark at all. Extracted is in fair demand at unchanged prices, with a good supply. Beeswax remains firm at 30c, but we expect a decline very shortly.
Hildreth & Segelken.

Philadelphia, June 8.—The comb honey season is now about over. There are not enough sales to fix any price. For the last 10 days commission men have been accepting any offer they could get, but did not fix any market value. Extracted honey seems a little off in price, some lots from the south being offered as low as 5c in barrels. We quote: Southern extracted, 6c. Fancy white clover, 7c. Beeswax is a little off; 29c for bright yellow is the top market price.

We are producers of honey and do not handle on commission. Wm. A. Selser.

San Francisco, June 1.—White comb, 1-lb. sections, 12½@13c; amber, 9@11c. Extracted, white, 5½@6c; light amber, 5@5¼c; amber, 3¾@4¼c; dark amber, 3¼@3¾c. Beeswax, good to choice, light, 28@30c; dark, 26@27½c.

Offerings of new honey are looked for in the near future, but not in heavy quantities. Stocks of old honey in this center are of quite moderate proportions and include little of high grade. Common qualities are not receiving much attention.

HONEY AND BEESWAX
When consigning, buying or selling, consult
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199 South Water St. Chicago, Ill.

For Sale 50 colonies of ITALIAN BEES, Hoffman frames in 8 and 10 frame hives, including extracting supers and combs, at a BARGAIN. B. WALKER,
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(Been at it over 20 years.)

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W. M. Gerrish, Epping, N. H., carries a full line of our goods at Catalog prices. Order of him and save the freight.

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Manufactures and carries in stock every article a bee-keeper uses. BEES AND QUEENS IN SEASON.
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ST. LOUIS, 1904.

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A No. 1 Smoker by mail, $1.

Bees, Honey and Beeswax bought and sold for cash.

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100 Colonies of Italian, Carniolan and their Cross, in 8 frame dovetail hives—full colonies at from $5.00 to $6.00 per colony. Address,
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27th Year **Dadant's Foundation** 27th Year

We Guarantee Satisfaction. What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS. PATENT WEED-PROCESS SHEETING.

Why does it sell so well? Because it has always given better satisfaction than any other. Because in 26 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material.
We sell the best Veils, cotton or silk.

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OF ALL KINDS.

Langstroth on the Honey-Bee—Revised
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

DADANT & SON, Hamilton, Hancock Co., Ill.

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WATERTOWN, LEWIS U.S.A.
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AMERICAN BEE JOURNAL

44th Year. CHICAGO, ILL., JUNE 30, 1904. No. 26.

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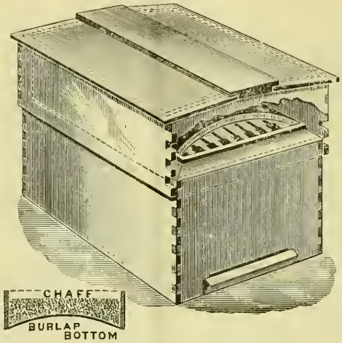
APIARY OF W. A. BOWLES, OF BARREN CO., KY.

APIARY OF J. L. STRONG, OF PAGE CO., IOWA. (See page 452.)

SEEMS STRANGE

To talk about wintering now. But don't let last winter's losses occur again. Insure successful wintering by putting your new swarms into **ROOT'S DOVETAILED CHAFF HIVES.** ∴ ∴ ∴ ∴ ∴ ∴ ∴



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It protects against extreme cold. It protects against extreme heat. It is used in Cuba and Mexico to keep the bees warm in chilly nights and cool in the hottest days. It winters the bees on summer stands as far north as they can be raised. In fact, it is the hive for every bee-keeper. For comb honey production it is in the first ranks. The ample protection of the super against cold permits uninterrupted comb-building so necessary in the production of comb honey. Send for our Catalog that tells all about it. ∴ ∴ ∴

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Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor. CHICAGO, ILL., JUNE 30, 1904. Vol. XLIV—No. 26.

Editorial Comments

Early Ordering of Bee-Supplies.

It would seem that after the very trying—almost heart-rending—experiences of last year, in endeavoring to get bee-supplies in time to prevent loss, would have caused all to run no risk of a recurrence of the trouble this year. But we learn that the difficulty is almost as great this year as it was last season.

We can not imagine anything more exasperating than to be without necessary supplies to take advantage of a good honey-flow. Especially after one has sent in his order for goods in what he naturally thinks ample time to receive them for use when really needed in the apiary.

Many a business has languished, and almost failed entirely, for the lack of ready capital to conduct it properly. But bee-keeping would hardly seem to be a business of that kind, as its demands or requirements are not large. In the majority of cases an extra investment of perhaps $50 or $100 would insure the possession of sufficient bee-supplies to avoid any loss or vexatious delay whatever.

But too many seem to look upon their bees simply as they do on their chickens. If they yield any returns, all right; if not, all right. So the requirements are not carefully considered, or, if thought of at all, it is often too late to prevent loss or delay. All dealers, if they could, would gladly fill every order the same day on which it is received, but of course that is utterly impossible in an establishment that does much business. The dealer has his troubles as well as the negligent customer. We know somewhat of the former's trials, having passed through them during the very trying season of last year. We have since thought that we'd like to write an article or two on "The Trials of a Bee-Supply Dealer." But if we did, perhaps some of our old bee-supply customers would come back at us with "The Trials of a Bee-Keeper Who Couldn't Get Supplies." And we might get the worst of it. However, we tried to do the best we could in filling orders promptly, but it was very aggravating to all concerned, as we were unable to get the goods fast enough from the factory that furnished them.

The lesson to be learned is this: Order your bee-supplies during the winter—perhaps three or four months before you really need them—then, in all probability, they will arrive in time for use when you must have them.

The No-Drip Shipping-Case.

Recently, R. A. Burnett & Co. called us over to their honey-store to see quite a large local shipment of comb honey that had come in from Iowa. It was all properly put up, and arrived in excellent condition, with one exception. It seems that the no-drip strips under the sections were too thin. They were only ⅛ of an inch thick, when they should have been at least ¼ inch.

The honey had not broken down at all, but it had leaked out of the combs so much that in some cases it was daubed all over the under side of the sections. Had the no-drip strips been thick enough, there would have been ample space below the sections for all the honey-drip, without its touching them.

This is a matter that the manufacturers should remedy. It may take a trifle more wood both in the strips and also in part of the case itself, but we believe the advantage to be gained by the extra thickness of the no-drip strips would increase the value of the case itself to those who use them. By their being made too thin, it simply defeats the very object for which they are intended, that is, when for any reason the honey leaks out of the comb either from unsealed cells or from cracking of the comb itself, the latter resulting sometimes from cold weather or from rough handling.

The Press and "Manufactured" Comb Honey.

Early this month we received the following letter from Hon. Eugene Secor, who, for several years, was the general manager of the National Bee-Keepers' Association:

FOREST CITY, IOWA, June 9, 1904

DEAR MR. YORK:—I notice that a good deal is being said in the bee-papers about an article on manufactured honey, written by Dr. Walker, which appeared in the June number of the Ladies' Home Journal.

This reminds me of a little correspondence I had with a party at Omaha, Nebr., who is in some way connected with the Tri-City Press Club, I think. As you know, I have been editing a department on bees and honey in the Northwestern Agriculturist for about a year. In one issue I stated that consumers might depend upon comb honey being pure. I also commented on the credulity of the public who think that comb honey can be manufactured, and also commented on the oft-exploded theory that hens' eggs were claimed to have been manufactured by machinery. This is the article to which Mr. Gilder refers. Since my reply I have not heard from him. Perhaps he is negotiating with The A. I. Root Co. for that $1000. It would be interesting to know the correspondence between them.

I was in hopes, however, to get a sample, thinking I might be able to enlighten him a little further.

It seems that this comb honey fake will never be entirely eliminated from the daily press and other journals.

I do not know that you will care to make any use of this material which I send you, but I thought I would let you know that I am not entirely out of the business, even though I am no longer general manager.

Very sincerely yours,
EUGENE SECOR.

The letter referred to by Mr. Secor, as having been received from Mr. Gilder, reads as follows:

OMAHA, NEBR., April 25, 1904.

EUGENE SECOR,
Editor Bees and Honey Department,
Northwestern Agriculturist.

Dear Sir:—In the issue of the Northwestern, under date of April 16, in an article on "Comb Honey is Pure," you speak of an offer of $1000 for a pound of comb honey manufactured without the aid of bees.

If this "manufactured honey" is not honey at all, or if you desire to create the impression that there is no imitation of honey in the comb, so-called, we would be pleased to have you state who offers the money. We would like some of it.

Concerning the eggs manufactured—of course, if this, too, is done by machinery they are not eggs proper. But some 15 or 20 years ago there was a factory located at Newark, N. J., which manufactured eggs, so-called. These eggs could not be fried or eaten raw, but they boiled very nicely, and tons of them were sold to restaurants, hotels, and boarding houses. They were composed of corn-meal and other ingredients, and were perfectly harmless so far as the eating of them was concerned.

As far as the honey proposition is concerned, there is sold all over the country an article supposed to be honey in the comb. Every cell is an exact representation of its neighbor, and the taste is the only means of detection to thousands of people who never saw a honey-bee, or know anything of its sting.

We are of the opinion that when the money was claimed, the party offering the same would get out of payment by saying that if the honey is manufactured, it is not "honey," etc.

Very truly yours, R. F. GILDER.

Whereupon, Mr. Secor replied to Mr. Gilder's letter in this fashion:

FOREST CITY, IOWA, May 21, 1904.

MR. R. F. GILDER,
Care Tri-City Press Club, Omaha, Nebr.

Dear Sir:—Replying to yours of April 25, addressed in care of Northwestern Agriculturist, which was forwarded to me here, I beg to say that the letter did not reach me until about five days ago, and my absence from home for three days of that time is the reason for the delay in answering.

From the tone of your letter you evidently think that comb honey can be and is made by machinery. I should be pleased to see a sample which you think has been made without the aid of bees. I have had enough practical experience with bees, and have had enough opportunities for observation, to believe the thing can not be done, but I am open to conviction when I see the proof. Please send me a sample, prepaid; and you might also send me a sitting of those machinery-made eggs.

That offer of $1000 for a pound of comb honey manufactured by machinery was made in good faith by The A. I. Root Co., of Medina, Ohio, and I think the requirements are about as set forth in my department from which you quoted.

If you are unable to obtain a sample of the article which you think is manufactured, perhaps you could tell the exact location where it is made, and I will investigate.

I shall be glad to hear from you, because it is the truth we want in this matter. Very truly yours,

EUGENE SECOR,
Editor Bees and Honey Department in Northwestern Agriculturist.

It seems utterly impossible to overcome the evil effects of that over-20-years-old manufactured-comb-honey misrepresentation. We know of only one thing to do about it, and that is, to strike it whenever its miserable head appears to view. Mr. Secor's method is commendable. It is just what every bee-keeper should do whenever opportunity offers. The bee-papers can do but little to counteract the evil effects of the republication of the lie about comb honey, as their readers know that their is no such thing as artificial or manufactured comb honey.

We are glad to know that Mr. Secor is continuing to do what he can to stop the further spread of the story that has done so much to injure bee-keeping.

Getting Increase vs. Honey.

"About this time," as the almanacs used to say, inquiries will be raised by beginners as to what method to pursue to get a large amount of increase without interfering in any way with the honey crop. They may as well learn first as last, that there is no secret plan by which such a thing can be done. As a rule, a swarm can be had only at the expense of so much taken from the honey crop. In localities where there is a large fall flow, it is possible that a colony swarming somewhat early may, together with its swarm, give a larger harvest for the entire season than the colony alone would have done if it had not swarmed. Even in such a locality, too much dividing up of the force by means of swarming will lessen the honey crop, the colonies not being strong enough for profitable storing, if indeed they are strong enough to gather enough for their own winter stores.

In most localities, the largest amount of honey will be obtained if the forces are kept together, with no swarming. The beginner is wise who makes up his mind that at least until he has considerable experience he will try to repress all swarming beyond one prime swarm for each colony.

Miscellaneous Items

A Great Work on the Bible.—We have just bought the 3-volume set of "The Popular and Critical Bible Encyclopædia," recently completed and now offered for sale by The Howard-Severance Co., 173-175 Fifth Ave., Chicago, Ill., who should be addressed for full information.

While we have not had the time necessary to examine this Bible Encyclopædia thoroughly, still we have seen enough of it to appreciate its great value to Sunday-school teachers and workers, and Bible students of all grades and classes. We are pleased here to give the judgment of the well-known and popular Epworth Herald, whose able editor, Rev. J. F. Berry, was just recently elected a bishop of the Methodist Episcopal Church:

A WORKING BIBLE CYCLOPÆDIA.

There is a place waiting in thousands of private libraries for The Popular and Critical Bible Encyclopædia. This is a new work, in three superb quarto volumes, and it has unquestioned claims on the attention of a great army of Bible students. There has long been real need for a cyclopædia which should satisfy careful students, and yet be moderate in cost. That need is completely met in this work. It is full, scholarly, and much less expensive than any work which will stand comparison with it. The editors are Bishop Fallows, Prof. A. C. Zenos, and Prof. H. L. Willett, who have associated with them a great company of distinguished scholars. They have drawn freely on all available sources for the foundation material, and have added a wealth of new matter which is of the utmost interest and value. The editors have wisely omitted lengthy discussions of minor critical questions, and have given the largest space to the essential facts for which a Bible cyclopædia is most often consulted. While the name limits the work to Bible themes, the articles have gone far beyond the boundary, treating church history, the history of doctrine, and many of their related subjects. This adds largely to the value of the work, and gives it a decided advantage over Bible dictionaries which keep strictly within the limitations of their title pages. The critical standpoint of the work is modern, and yet conservative. Full recognition is given to the established conclusions of present-day scholarship, and the theories of the critics are freely and fairly stated. But there is no inclination to surrender the strategic positions of evangelical Christianity at the command of critics whose theories are destructive, not only of orthodoxy, but of each other. The publishers have done their part of the work admirably. The three volumes are strongly and beautifully bound, and the typography is all that could be desired.

* * *

National Convention at St. Louis.—We have received the following from Secretary Brodbeck:

LOS ANGELES, CALIF., June 18, 1904.

EDITOR AMERICAN BEE JOURNAL.—

Dear Sir:—The annual session of the National Bee-Keepers' Association for 1904 will be held in September, at St. Louis, Mo.

September 27 and 28 will be devoted to Association work and its interests.

September 29, International Day. We expect many prominent foreign bee-keepers to be present on this day.

September 30, Inspectors' Day. Twenty bee-inspectors from all over the United States and Canada are counted on to introduce and discuss "The Diseases of Bees," etc.

Mr. N. E. France will exhibit, in the Convention Hall, a large map of the United States, Canada, Cuba and Europe. Each State and Country will have a shelf attached to the map with a one-pound sample of each kind of honey produced. Many other exhibits of special interest will be shown.

We expect to see the largest gathering of bee-keepers ever held in this country. A more detailed program will appear later.

Respectfully, GEO. W. BRODBECK, *Sec.*

We hope that just as many of our readers as possible will plan to be in St. Louis the last week in September, so as to attend the sessions of the bee-keepers' convention. It should easily meet the expectation of Secretary Brodbeck.

Remember, it is the last week in September, beginning with Tuesday, the 27th.

* * *

The Apiary of Mr. W. A. Bowles, of Barren Co., Ky., appears on the first page. When sending the photograph he wrote thus, under date of June 3:

I send a picture of my apiary of 48 colonies. The hives face south. This is the worst season for bees I ever saw, so cold and wet all through the spring. Bees are weak. We will not get any honey this time.

I have kept bees since 1894, and have been a reader of the American Bee Journal since 1896. I winter my bees on the summer stands.

The man in the picture is myself, and the other is "my cook." I "stole" her about 20 years ago. Then I had to appear before a preacher and make some promises, that I fear I have not kept as faithfully as I should, for I have heard some grumbling about stove-wood.

W. A. BOWLES.

* * *

"The Alfalfa and the Omega."—At a meeting in the West last winter Secretary Wilson was the chief speaker, but also on the stand almost unnoticed and unknown was Mr. Colman, the first Secretary of Agriculture after the bureau was established. One old farmer, noting that the first and last were present, and being something of a stump speaker, thought he saw a chance to make a point. At the first opportunity, therefore, he arose and grandiloquently informed the assembly that they had with them "the Alfalfa and the Omega." He never got any further, however, the rest of the speech being drowned in laughter. He certainly had hay in his eye, if not in his hair.—American Farmer.

* * *

The Apiary of J. L. Strong, of Page Co., Iowa, is shown on the first page of this number. Mr. Strong wrote as follows:

I send a view of my apiary taken from a point looking northeast. That old man is the proprietor, and rears the queens. The other two are his sons, aged 5 and 16 years, respectively. In front are three baby hives, referred to in the American Bee Journal of recent date. We made a dozen of them as a trial.

In the rear of the apiary are four rows of Langstroth hives, 25 in a row, with queen-rearing hives in between. The hive that the little boy sits on is one of them.

The large hives in front are of my own design, and have been used, for the production of comb honey, for the last 25 years. The brood occupies five or more combs in the center, with space on either side for sections, and also in the rear, and with room on top for a super holding 28 one-pound sections, thus giving room for 100 pounds of section honey at one time.

There were less than one colony in four, in these hives, that made any attempt to swarm last season, and it was a good season for honey, and they were strong colonies. This is also a good hive for winter, as it is packed in the space after removing the sections.

J. L. Strong.

Contributed Articles

Perfect Wintering of Bees.

BY S. T. PETTIT.

I AM more than pleased with Mr. G. M. Doolittle's account of the perfect wintering of that first colony taken down to remove from the cellar—page 422. I venture the statement that these bees were so quiet that no sound could be heard from them by the most accute ear nearly all winter.

When I made the statement several years ago that when bees are wintering perfectly they do not hum, I remember that Mr. Doolittle quite disagreed with me. While I have learned many useful things from him, I knew then that he, though wintering his bees fairly well, had some things yet to learn about wintering bees. What that one colony did, nearly all in the cellar will repeat when the bees and nearly all conditions are right. Years of experience makes me bold to say this.

I here reiterate what I have said before, that *few bee-keepers indeed* realize *the possibilities of perfect wintering*. Once I was trying to impress upon the Ontario Bee-Keepers' Association, that when bees are humming they are not wintering perfectly. They gave me a good hearing, but I stood alone, and Mr. J. B. Hall suggested that I was a little hard of hearing!

I have for years had many instances like the one colony described by Mr. Doolittle. Toward spring there will always be some colonies to murmur. That colony was practically in the same condition as it was when it went into the cellar, and was ready to catch the first flow from any source. When bees are wintered rightly, supers should go on to catch the spring and fruit-bloom nectar. I said when the bees are right, that is, of quiet, gentle, contented temperament; for it should be understood that the perfect wintering depends not a little upon the temperament of bees.

Mr. Doolittle doesn't want any advice from me, but I'll venture to suggest that he will do well to breed from that queen. But there are other factors to be considered. No bee-keeper can reasonably hope to become a success at perfect wintering unless he devotes a good deal of time with his bees, in studying their conditions as to quietness. Depend upon it, if they are humming, something is wrong, and more frequently the ventilation is at fault than anything else.

When I used to remove bees from the cellar I did not stop to examine for life. I rushed them with all possible speed to their stands, so that as nearly as could be all might fly at once. And almost always those that seemed "deadest" had the most reserve force and life.

In that one colony Mr. Doolittle has described the key-note—my ideal of perfect wintering of bees.

West Ontario, Canada, June 17.

Drones to Keep the Brood Warm.

BY C. P. DADANT.

I HAVE just read Dr. Miller's article concerning the number of bees or drones detailed to keep the hive warm when a swarm issues. Dr. Miller is a practical man, and it is much more pleasant to discuss a point with him than with some one who has watched one hive of bees or made experiments on one colony and draws his deductions from that as a rule to work by.

The Doctor has surely watched bees when they swarm. If he has made remarks similar to mine, he has seen the drones issue just like the workers, drawn out by the cyclonic nature of the outpour. There seems to be a terrific force behind the bees—a regular windstorm inside of the hive—and I doubt very much whether any of the bees stop to study over the required number necessary to keep the brood warm. It is true that, at a certain point, the rush allays, and shortly after there is a re-call and a number of the bees seem to regret the bereaved condition of their home, and set themselves to work calling back the departing swarm. But an examination, after all is quiet, will show that in some instances very few are left, while in others many have come home again.

So, if my opinion is asked, I will say that I do not believe the bees use any judgment or care as to how many are left. Many drones come back, some go with the swarm, but I doubt if any one will dare affirm that the greater or the less number remain.

It seems to be very abitrary. Usually, also, few bees are left, except those which were in the field when the swarm issued, and the very youngest of the bees, unable to hustle enough to follow their sisters. If most of the drones remain, they are surely in addition to the bees, and I am decidedly of the opinion that there is no oversight in regard to the number of bees left in the hive, although I am more willing to grant them a high grade of intellect than many writers do.

But I consider the drones of very little use in any case for warmth. They are there during the warmest weather, most numerous when the hive is so warm that the bees have to cluster outside. If there is a lull in the warm weather—if the wind turns to the north and the crop stops—the first thing the bees will do will be to chase those drones and drive them away, unless the colony is queenless. In this very changeable climate we probably notice this oftener than they do in more equable climates. I have no doubt that my readers have all seen the drones driven out, more or less, a few days before the opening of the crop, when their warmth would be of use if ever.

In this question of the prevention of the rearing of drones, which I have strenuously advocated, I have found quite a little opposition. Not long ago a French writer took me to task, with very caustic remarks, comparing my position to that of the simpleton of Lafontaine's fable who was criticising God for not hanging the pumpkin to the branches of the oak, but who changed his mind when an acorn fell on his nose from the top of the tree. "God does well what he does."

When He wants to reduce the number of drones produced, we do not contradict Nature. There is no fault to be found with the excessive production of drones, in a state of Nature. Since the queen mates in the open air, she must necessarily run many dangers. It is therefore necessary that drones exist in great numbers in order that she may mate readily. But the drones of half a dozen hives will sufficiently fill the air in the vicinity of the hives containing virgin queens to supply as many as needed for a hundred colonies. We are no more to be looked upon as finding fault with Nature, when we seek to prevent the production of drones, than the farmer who castrates his boar pigs, his colts, his calves. "God does well what he does." But we would bring a very broad smile on the lips of the most rigid Presbyterian if we were to try to convince him, that for that most excellent reason he must preserve all his boars, his stallions, and bulls.

My experience with the reduction of the production of drone-rearing dates back many years. When I was a boy, we often purchased bees in box-hives, in gums, in barrels, in kegs, dry-goods boxes, etc. When May came we transferred them, combs and all, to movable-frame hives, during apple-bloom. The first thing my father taught me was to discard all drone-combs, and to fill the transferred hive with worker-comb from dead colonies. We had two good reasons for this: First, we did not believe that it paid to rear drones; then we wanted our drones reared in our best Italian colonies, and the bees we transferred were always black or common bees.

By great care we succeeded entirely in preventing the production of black drones in our apiary. When I say "entirely," I must make a correction. We never did succeed *entirely*, but so nearly that the number of black drones produced was only an infinitesimal fraction of the total number reared, and if we could only have controlled our neighbors' apiaries as we did our own, we should have changed the breed of the bees from brown to yellow very quickly.

It is impossible to do away entirely with the production of drones, but the man who takes pains can reduce it to the minimum; at the same time, by a contrary process, increasing it to the maximum in the colonies which he considers as the best for honey-production. Hancock Co., Ill.

The Standard Section—Under-Weight and Over-Weight.

BY A. C. F. BARTZ.

On page 182 appears a contribution by Mr. Allen Latham, in which he takes issue against the under-weight sections, that is, against the sections weighing less than a pound when filled with honey, and wishes every other bee-keeper who opposes the same would send in his protest.

Now, Mr. Latham, I wish to congratulate you very much regarding the stand you are taking, and wish to go on record with you on the same protest; for, like yourself, I have given considerable thought to what should be the standard section, and have come to the conclusion, by a number of extensive experiences, that the standard section should be 4¼x4¼x1 15-16, for several reasons.

First of all, its dimensions as to height and length; it fits most of the supers of standard make, as it has been in use so long that most bee-keepers have adjusted themselves accordingly.

Secondly, its width admits of a pound of honey, the nearest of any manufactured, providing the bees are crowded to a finish, and separators 4 inches wide are used. Right here I wish to ask what in the name of common-sense caused the bee-keepers to use a 3½-inch wide separator, as nearly every section of honey produced with them has a bulge at the bottom, if the separator is put even with the top of the section as it should be, else a brace-comb at the top? And what under the sun made some of them invent the fad, or humbug, of the tall section with fence separators? To my notion a greater nuisance than the fence separator and the tall-section fad has not been imposed upon bee-keepers for some time. I wish the bee-keepers who keep bees for the dollars and cents there are in it would pay no attention to such fads, nor would I advise any of them to go to a great deal of expense to change their supers to accommodate any other style section than they are now using, because the honey-consuming public has been imposed on to such an extent by under-weight sections that they are fast becoming aware of the fact that there are different weights on the market, and are insisting on having their honey weighed, and every honest-thinking bee-keeper ought to inform the public of the fact, and educate them so they might know, when buying honey, to buy by weight only, the same as the bee-keeper gets paid in most of the markets by the pound, regardless of what each section weighs. Otherwise the bee-keeper sells by the pound and the consumer buys by the pound, but receives by the piece as is now being practiced. And I think the reason my honey is in such demand by some dealers is on account of its plump weight.

One dealer in Chicago has written repeatedly that some of his customers didn't want any other honey than mine, and would wait several days rather than buy any other (I suppose light-weights). Now I don't stamp my name on my honey, either, so here it will be seen that it is not the name the consumer is after—it is the quality and quantity he gets for his money that he is after.

Of course, I believe in strict rules of grading, and would like to emphasize what Mr. Niver said about it on page 222, at the Chicago-Northwestern convention; but I do not agree with him as to the trouble of figuring if selling by the pound and having sections of different weights, as this is easily overcome with our modern "computing scales;" and I have found many dealers of late insisting on weighing the sections on account of their being so extremely light that even they themselves did not feel just right when selling to a customer asking for a pound of honey. For it was really the case, in this county, and I believe in most of the smaller towns, the people think a section of honey is a pound. As I am keeping a grocery store myself, I have a good chance to know what the people ask for, and what they are expecting to get, and I, too, must say that 99 out of 100 are under the impression they are buying a pound of honey instead of a section. The argument that they should think an orange or lemon has to be a certain weight is not parallel, for it is generally known that oranges, lemons, and eggs, are not weighed but are sold by count, but it is not so generally known that honey in the sections is sold that way. Of course, if the public were educated up to there being a half-dozen or more different grades and weights on the market—as they know there are oranges and lemons—they would not feel deceived if they bought the light-weight ones; but that is just where the "shoe pinches"—they don't know, and are either deceived or else pay a big price for an education they will finally obtain if they buy honey long enough to discover the difference.

And for the aboved-named reasons I am in favor of a section of honey weighing a pound, and if a case of 24 sections overruns I do not charge the wholesale house, nor the retailer with the overrun, but make every case 24 pounds if it weighs that or more; but if it weighs under 24 pounds, the exact net weight is put on the case. In this way it will be seen that the consumer is not cheated. When he buys a section of honey supposed to weigh 16 ounces, and it weighs 17 ounces, I am the loser of that. So you see this is a new scheme, and, take my word for it, if you practice this last-mentioned scheme—that is, have your honey rather over-weight than under-weight—you will have many satisfied customers, and no trouble in satisfying customers and no trouble in selling your honey even if your name is not on every section, nor even on the case. The wholesale dealer and commission man will take care of your name. I want them to be in business any way, and I like to see them prosper. They are the bee-keepers' best friends, providing they are honest, and if some are found to be dishonest discard them and try another.

I have sold thousands of dollars worth of honey, and so far have found only one crook, and I sold to him only once. I warn every bee-keeper, or probable shipper of other produce, to beware of him. I have advertised him wherever I have gone, and so should everybody who has any produce to ship, be it honey, butter, eggs, or anything else. If a commission man or jobber is found to be crooked, nail him to the cross and keep him there; but if he is honest and upright, treat him kindly. We need him.

Chippewa Co., Wis.

Convention Proceedings

Report of the Convention of the New York State Bee-Keepers' Association.

REPORTED BY MORLEY PETTIT.

(Continued from page 440)

AFTERNOON SESSION.

The following paper was read by Mr. N. D. West, one of the New York State bee-inspectors:

FOUL BROOD AND BLACK BROOD.

It is a great pleasure for me to meet with you at a bee-convention like this. It makes me think of family reunions. We come together as friends for a great, jolly time, and a profitable one, too, and we expect to have it, although one day is too short a time to hold a bee-convention. Some business must be done, and then we want time to shake hands and talk with everybody. If we are not acquainted we expect to get acquainted, and tell each other how little or how much we know about things pertaining to the bee-business. I suppose that you expect me to tell you something about black brood. Well, I must say it's a terror. It has ruined many whole apiaries. In fact, all of the apiaries in some localities. There has been a time when you could hardly find colonies of bees that were not more or less affected with some kind of brood-disease, in what we term diseased localities.

However, things are improving. Apiarists are learning what to do. Those who have lost their bees—many of them—are now holding their own in numbers, and are securing good crops of surplus honey again, and it is almost impossible for them to keep their apiaries entirely free from the disease; but the disease is becoming less and less *each favorable year* in those localities.

The season has very much to do with the progress of the disease. The season and all outside influences have much to do with the success or failure in curing black brood. The McEvoy treatment for foul brood is perhaps as good a rule as can be given, in so few words, for curing what we call black brood, as well as foul brood. However, circumstances and conditions are such that I, as a bee-inspector, am obliged to decide on some special work or treatment for an apiary after inspection. I can not give a fixed rule that would best apply to all colonies and apiaries in different localities, especially in localities where apiaries are more or less diseased. I always have the apiarist go with me and help do the work while I am inspecting his bees, if possible. After inspection, if the disease is found to exist, then I consider the man as to his *ability*, *disposition*, and how he is circumstanced to do the work required. Then I advise with him, and make the best use of him that I possibly can to eradicate the disease and make his apiary safe, at the same time. I consider his economy in doing the work.

Bees that are badly diseased with black brood, and have become very weak before the honey-flow begins, would better be destroyed. Bees that become diseased with black brood so that the old bees become sick and dumpish, should be destroyed; they can't be cured.

The best time to cure colonies affected with black brood is during a good honey-flow, when it has come to stay. After the bees have had a few days to gather some new honey and put it in their old combs, then shake the bees off their combs and put frames filled with comb foundation in their place; new or disinfected hives preferred. Once shaking will then generally cure, if the live bees or queen are not diseased.

Black brood is more radical in a new territory than after it has been there for a year or two. Apiarists that are not used to treating bees for black brood should attempt to treat but a few colonies at a time, until they get experience, especially by shaking bees off on frames of foundation. There is a method of dequeening a colony for 21 days, and then giving them a new, choice Italian queen, which, if done at the right time, will help to control swarming, and very much improve the condition of bees that are strong enough to swarm, but are more or less affected with black brood. This will very often effect a cure the first season without diminishing a crop of comb honey. Repeat the work again the next season, and the apiary will improve every year, if you give the colonies better queens. Weed out and destroy all weak, run-down colonies caused by black brood every fall and spring. *It pays best to do so.* Make increase from healthy stock.

With natural swarming, the disease sometimes follows the swarm, and sometimes the young swarms will not be affected. When there is abundance of new honey just gathered in the hive, the swarm will go out laden with honey which is fresh, and not likely to be diseased. The queen and bees are not likely to be affected, only when found in run-down colonies.

There is very much to be said on this subject, but I must bring this to a close I may now be misunderstood, and possibly it would have been better had I said nothing on this sublect.

FORMALDEHYDE TREATMENT OF DISEASED BROOD.

It may be well to bring out a few thoughts on the subject of formaldehyde gas as a treatment for disinfecting diseased brood in combs, its effect on the brood, and also on live bees. With what experience I have had with it, it has proved to be both success and failure. I have had quite a great deal of experience with the use of. formaldehyde gas in disinfecting brood-combs with very great results. However, much depends upon the condition of the combs, and how they have been previouly prepared. I would not as yet recommend using brood-combs promiscuously through an apiary that had any of the dried-down matter or scales caused by diseased brood, that can be seen with the naked eye. I have experimented some by trying to disinfect a diseased colony of bees by running the bees through a small rubber hose directly into the bee-entrance of the hive, making all other places of the hive tight to keep the gas from escaping. I have tried 50 or more colonies in this way. It is surprising how much gas the bees can endure and live. They will stand the gas for four or five minutes before they will begin to drop while treating in this way. I close the entrance of the hive with a cloth or handful of grass to keep the gas from escaping. After about two minutes I remove the cloth to let in a little fresh air at the bottom of the hive, and also look and see if the bees begin to drop near the entrance. Then I close up the hive again and keep the gas running in for about five minutes, then remove the cloth. Do this at any time when the bees begin to drop and run out over the grass in front of the hive. This treatment will destroy all of the uncapped brood in the hive. The bees will carry out the dead brood and polish up the combs. The queen will very soon fill the comb with eggs, and for a while the condition will look favorable. but after a little the disease will begin to show up in a mild way.

My first few trials with formaldehyde gas were a complete success. I took some of the worst cases of diseased brood that I could find, and after disinfecting them I went to strong, healthy colonies of Italian bees, and took out three frames per hive and put in their place three frames of the disinfected combs. These combs were soon cleaned up and filled with good brood. After this I had several colonies treated, and new swarms hived on the combs, and all went well. The following spring those colonies were in fine condition. Last season I had swarms put on some combs that were disinfected the previous season, and all went well. The past season has not been so favorable with disinfected combs that were filled with diseased brood. For a while the brood in such disinfected combs would appear good, but later I could see the disease again in a mild form *advancing*. What the cause may have been for both success and failure I can not say. Possibly it may be in the strength of the formaldehyde. It may have been because with my first and successful treatment the combs were put in a small box and treated for a half hour. Perhaps the heat and steam may have softened up things in general, so that the gas had a better chance to do its work. *I don't know.*

So much for what it is worth. Any one who has had experience with formaldehyde in disinfecting badly diseased brood-combs, I would be pleased to hear from them. I expected to say but a few words when I commenced, but I did not know where to stop. Pardon me for using so much valuable time.

N. D. WEST.

Mr. Stewart—In the fall, after the breeding is done, remove diseased combs and give the bees healthy combs. This cures them. Even if they should carry some honey with them they would eat it all before next brood-rearing.

(Concluded next week.)

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Death of Mrs. Harrison.

The news of the death of Mrs. Lucinda Harrison comes as a shock to those of us who knew her. She was a woman of ability who did her own thinking, an accomplished bee-keeper, a vigorous writer, and above all a good woman. Green be her memory.

Keeping Queens Received by Mail.

When a queen arrives by mail before the bee-keeper is ready for her, what is the best procedure? IOWA.

In warm weather she can remain in the cage in the house a number of days without being chilled, until you are ready for her, or she can be put in any hive to be taken care of, if you first see that the cage is fixed so that the bees can not eat through the candy to get to her, perhaps fastening a a piece of tin over the candy.

Hatching Eggs Over Bees.

If chickens can be successfully hatched from eggs placed over a colony of bees, a good many of the sisters would no doubt like to know more about it. It seems that Mr. Hutchinson, editor of the Bee-Keepers' Review, has been making some experiments in that line. He says:

"Hatching eggs over a hive of bees has been reported occasionally, but there always seems to be some sort of vaguery about the reports. They have not come direct, but have always been in the nature of a *report* that some one had *heard* of some one who *had* succeeded. It is doubtful if any eggs were ever hatched in this manner. The normal temperature of a colony of bees never goes above 100 degrees, while the temperature of a fowl is 105 degrees. The temperature of a colony of bees is not high enough to hatch the eggs of a foul. Incubators for hatching eggs are kept at a temperature above 100 degrees, while the brood of bees will not endure such a temperature, as I learned to my sorrow when using a lamp-nursery in hatching out queens. I several times tried to hatch hens' eggs in the lamp-nursery, which was kept at a temperature of about 97 degrees, but never succeeded. The germ would seem to begin to grow, and red veins would branch out from it, and then development would cease and remain the same, even though the egg remained in the lamp-nursery for several weeks."

Mr. Hutchinson's experience is much like that of others, but is he not in error in thinking that no one has given a direct report of success? On page 300, J. G. Norton says: "I still hatch chicks in bee-hives. It is no fake, and I have no patent for sale. I practice the same at home for my own satisfaction."

Orange Honey.

Grate the yellow rind from two fine oranges and add to it two pounds of strained honey. Remove the juice and pulp from one dozen oranges; this should measure at least a quart; add this to the honey. Turn the whole in a preserving-kettle and boil carefully for half an hour; then put it into pots, and when cold cover with paraffin or oiled paper.—MRS. S. T. RORER, in Ladies' Home Journal.

Winter Losses—Prospects Good.

DEAR MISS WILSON:—The past winter has been enough to try the faith and courage of the oldest and most experienced bee-keepers, and never was such a large percentage of loss of bees suffered within the memory of any living bee-keeper. Some have lost every colony, and others have lost a few.

Last fall I put 21 colonies into winter quarters in as fine condition as I ever saw bees. There was plenty of honey in the hives, and the colonies unusually strong. Judging from past experience, I confidently expected to have a fine apiary ready to begin work in the spring. But, alas! "the best laid plans of mice and men gang 'aft' agley" (and women, too). I have to-day just 4 colonies of bees, and those not very strong.

Those bees were dug out from four to ten feet of snow eight times during the winter. I find that my bees suffered from excess of moisture. The snow above and around the hives kept them warm and damp, some of the combs full of honey dripping with the condensed moisture, and the heavier the colony the worse the trouble. The few that I saved were more exposed, with a better chance for ventilation. Now, I would like to know what any one could have done to combat those conditions of last winter.

I have been successful in wintering bees on the summer stands for several years, but this experience leaves me in a condition of mind that I imagine hundreds of bee-keepers in the North can understand, and that is, that we have additional proof that there is much that we do not know about bee-keeping.

I am wondering a little about Mr. Doolittle, the successful bee-man of New York, as to whether he lost as large a percentage as many of us have. If he saved his bees, I wish he would tell us how he did it—and I shall be ready to join his class for beginners.

This promises to be a great year for honey in Central New York, for those who have bees to gather the nectar. White clover and alsike are fine, and the fruit-trees full of bloom, but colonies are so weak that they are coming up slowly.

My home, until three weeks ago, was in Oneida Co., N. Y. The enclosed clipping will explain why I subscribe myself— MRS. HENRY ALLEY.

Essex Co., Mass., May 29.

It is hardly safe to say what might have prevented so great a loss, but as the colonies that had the most ventilation wintered the best, perhaps more abundant ventilation for all might prove successful. How would it do to winter them in the cellar?

I may say to the sisters that the clipping referred to gives an account of the somewhat romantic marriage of Mrs. Margaret Ball, of Oneida Co., N. Y., to the well-known queen-breeder, Henry Alley, of Essex Co., Mass.

Three years ago Mrs. Ball bought a queen-bee of Mr. Alley, and her workers proved to be fine honey-gatherers. A correspondence regarding that queen ensued, in which an acqaintance was formed. Mr. Alley wanted that queen back, but the widow was loath to part with it. Perseverance, however, finally secured both widow and queen, and Mrs. Ball is now Mrs. Alley.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

PRESERVING SOME PURE BLACK BEES.

I can heartily second Allen Latham's suggestion that some means be taken to keep a few colonies of black bees pure. Some not too big island somewhere would seem to be the thing. Those of us who have the love of Nature in us regret to see the extinction of any decided natural form. Much has been done to prevent the extinction of the buffalo. It is greatly regretted that the dodo slipped away from earth just before the love of Nature's things grew up. And if somebody had a practical scheme to prevent the extinction of the great auk, he would find plenty of people willing to subscribe toward the expenses of it. But the German race of bees we want for something more than for mere sentiment's sake. Their whiteness of capping, and especially their willingness to store honey a long distance away from the brood, are grand qualities which we should collectively be fools if we did not safeguard somehow. My verdict is, Italians for extracted honey, and pretty well blacked hybrids for comb—and to be sure of securing these we don't want to let either of the ingredients disappear. So many intelligent apiarists in England don't want anything else than pure blacks that perhaps they have already gotten things in safe shape. But if America possesses in the brown bee of Arkansas a peculiar strain of the German race better than any one else has, we are the ones to attend to that. Page 343.

LETTING NATURAL SWARMS HANG HALF A DAY.

It would be a very unsafe rule to leave natural swarms on the bough half a day—often go in less than an hour. Wonder if Allen Latham has had experience long enough and broad enough with his driven hive clusters to be able to guarantee that they will not "pick up and leave." Page 343.

GROUND CORK'S MOVING HABIT.

So ground cork has the sand-in-the-hour-glass bad habit of perpetual movement if it can find even a very small hole to get through. A novice might think it easy always to have bee-cushions and cloths absolutely tight—but we'uns, the graybeards, know the opposite. Page 343.

KEEPING EMPTY COMBS.

Sometimes combs will keep in summer with no more care than the spiders and ants give them. 'Spects this must cover the case of F. Z. Dexter, page 351. So I advise trying in a very small way at first (if indeed you try at all) the scheme of fixing hives full of combs so the moth can't get in without getting sulphur on her feet. The plan seems to offer no defense against eggs already in the combs, laid during fall and winter. My experience is that combs on which bees have died are pretty apt to have lots of eggs in them, while empty extracting-combs usually have none.

SWARMS CARRYING FOUL BROOD.

The question, Do bees ever carry foul brood with them in swarming? seems to imply an opinion that usually they do not. Glad if that is so. I have but little experience of my own, but much reading about foul brood somehow put the idea into my head that not only they sometimes do, but that they usually do. Quite likely wrong. When we think a moment we see that as it is at least four days before they can have any brood to feed it to, there is a fair possibility of all infected honey getting eaten up before that. It just pops into my head that a swarm probably can not develop foul brood till at least six days after hiving. They are not supposed to feed very young larvæ any honey. The creamy food fed to the very young is a pure secretion, I believe; and there seems no probability of foul-brood germs being in a pure secretion. Page 358.

ANNOUNCING FOUL-BROODY APIARIES.

Shall there be the fullest publicity given to every case of foul brood? On the whole, I'm glad a strong editorial note on page 355 raises the question. We have been doing the other way mostly; and the results have not been at all satisfactory. Both the uninfected and the infected are injured. Bad for the former to catch a dire disease they might have avoided; bad for the latter to take such a brutally selfish view of things as some of them degenerate into doing. When good and impartial persons too easily consent to keeping whist, the selfish man who is already endangering the public thinks it's no great matter if he goes further and does worse.

FOUL BROOD AND BLACK BROOD.

A *modified form* of the same foul brood bacillus is he that produces black brood, we hear. As we hear it from authority, we must heed also. Bacilli propagate with such fearful rapidity—such a myriad of generations in a year—that it doesn't take many years to have an incipient breed. Interesting to see that Prof. Cook had noticed a division into two distinguishable types before black brood appeared. Page 358.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Perhaps Mason-Bees—Queen-Cells in Supers—Apis Florea.

I have mailed you a queen-cage containing a few bees that I caught on the school-ground to-day. They are a peculiar kind; they have their abode in the ground and enter it through a small, round hole, just the size of a bee.

1. Are they any good as honey-gatherers? You will notice that their back legs are very much larger than those of regular honey-bees. They are different in shape, their eyes are green, and they are a little smaller than the Italian bees. They have no stinger. It may be the stingless bees.
2. You will notice in the cage a lump of some kind of stuff they stored in there as soon as caught. What is it?
3. If there is a super on top of the brood-chamber, separated by a zinc honey-board, with queen-cells in it, and one was to hatch, would it cause the bees to swarm?
4. Where can the Apis florea be obtained, and at what price? We want a colony for curiosity. LOUISIANA.

ANSWERS.—1. I don't know much about such things, but believe they are mason-bees, which store no honey whatever.

2. A mass of pollen.
3. Generally not; but in some cases it might.
4. I don't know; doubtful if you find any in this country.

Beeswax—Queen Progeny—Cider and Bees.

1. What is beeswax, or what does it originate from?
2. In my hive No. 1, I put a (Moore) queen last fall, and the first week in May I took out the frame she was on and clipped her wings, and found her laying. I timed her with my watch, and she layed nine eggs in one minute and fifty-five seconds. At this writing honey is flowing in at a great rate, but I can see nothing but hybrids. Do you think it time for her brood to be out? The honey-flow did not begin here well until about the middle of May. The leading apiarists here are watching my hive No. 1 with interest.

The red clover fields are very heavy here, and I only wish I could have a few colonies of "bumble-bees," as it gives a good flow until frost.

3. While I am encouraged with the honey outlook in Linn County, still I am fearful of one thing: I am within ½ mile of a large apple-orchard, and it is loaded with fruit, and they make cider there, and while I will have a good patch of buckwheat at the very front porch of my bees, still I fear they will get hold of the cider. Now, do you think we could prevent the bees from storing cider, by not allowing them any more storage-room in the hives? This bothers me more than anything else. MISSOURI.

ANSWERS.—1. Look closely at a lot of bees, especially at swarming-time, and you will see some of them that have along their abdomens little plates of pure beeswax somewhat pear-shaped. That's where the wax originates, being secreted by the bee from the food it eats, somewhat as the cow secretes milk from the food she eats.

2. There certainly ought to be plenty of bees from the new queen by this time. If you got an untested queen, she may have met a black drone, in which case her worker progeny should be hybrids. If you got her for a tested queen, there is a possibility that she was killed immediately upon introduction, and another queen was in the hive.

3. It will hardly be practicable for you to have the hive so full of stores that no plunder from the cider-mills could be stored. You might, however, do this: Get the bees to cram their combs as full as possible before the cider era; then at the beginning of cider-making take out of each hive one or two of the filled combs, replacing them with empty combs. That will give the bees a chance to do most of their cider-storing in these empty combs, and when the cider business is over you can take out the cider combs and return the ones taken away. Possibly you could get the cider-presses screened with wire-cloth. That would also avoid the loss of bees that are killed in large numbers in presses. If the cider-makers will not screen their places, get them to do this: Take a paddle and kill every bee that comes about the press, so that no bees shall go back to the hive to tell others where they can go to get cider.

Wood Splints Instead of Wires—Separators.

I am somewhat puzzled to know how you use your splints in fastening in foundation.

1. Are they made long enough so as to fit tight between top and bottom bar, or are they pressed into the foundation a little way from either bar? That is, are they a little shorter than the distance between the bars?
2. If they are shorter, what good are they at all?
3. Do you use wire in addition to splints?
4. How thick and wide are the splints?
5. What kind of wood are they made of, and are they sawed or split?
6. What is your opinion regarding the Australian way of using splints instead of wire? They use only one, and it runs horizontally.
7. I am going to use 1⅝ sections and plain separators. The separators are tacked onto one side of each section-holder and made narrow enough so as to leave ¼ of an inch opening at top and bottom of section. What do you think of this plan? And will it give light sections? ONTARIO.

ANSWERS.—1. The space between top and bottom bars is 8 inches, and the length of splints 7⅞, making the splint lack ⅛ inch of filling the space; this for no other reason except convenience in putting in. When putting in, no attention is paid to whether the splint is close against the top or the bottom, or any where between.

2. The shortest answer I can make to that is to say that after having thousands of them in use I find them to act just the same at if the splint filled the whole space. I suppose the sagging that can take place in a depth of ⅛ inch is imperceptible.
3. No.
4. About 1-16x1-16; measurements need not be exact.
5. Basswood, sliced or sawed.
6. They use hardly splints but horizontal bars of substantial thickness. The depth of the frame being cut in two in this manner, of course the sagging will be more than cut in two; but still there will be some sagging, I suppose, and the combs will either be sagged near the bottom-bar, or else there will be a space between the comb and bottom-bar. Please remember that the chief end sought and attained by the use of the splints is to have the combs built down solid to the bottom-bar. But this building must be done when honey is coming in, or else the bees will dig away a passage under the comb.
7. Wooden separators tacked on did not work satisfactorily for me, curling in an objectionable way. Tin nailed on works all right. If the sections are of such size as to make the proper weight when used with fences, of course they will be light-weight when used with plain separators.

Perhaps a Case of Pickled Brood.

We now have 15 colonies of bees, all coming through the winter in good shape excepting 1, which had a drone-laying queen, so I united it with another colony. The others were all very strong as we had a splendid season here last summer and a mild winter. My bees are hybrid Italian, excepting one colony of blacks.

In looking through the different hives, cutting out queen-cells, I found the black bees had some kind of a disease. Since looking through "A B C of Bee-Culture" and back numbers of the American Bee Journal, I think it is a case of pickled brood, but I am not positive. The young brood is not affected but just before and after being capped over. The larvæ are black in color, and lying on the bottom side of the cells. It has no odor, nor ropy appearance. The bees will not clean out the cells, and we found from one to four eggs in cells that were diseased. We also found plenty of honey, but very little pollen. It has been very cold and wet here for a month. When the dead larvæ are taken out with a match they are very watery or dark fluid. Please tell me what the disease is, and what can be used as a cure. Some recommend burning, and some say not. Will it do any good for me to try to cure the disease, as there are a number here who keep bees as I used to keep them, never looking at them until winter, and probably go with some sulphur and destroy some colonies of bees, getting what honey they have. There is but one person in all this neighborhood that takes a bee-paper besides myself. They don't want

to bother with bees, although we are in a good location, with lots of alfalfa. The black bees are great robbers, and I think they brought the disease from some other place.
KANSAS.

ANSWER.—Your diagnosis is likely correct, and I can hardly suggest anything better than to follow the treatment laid down in your book.

By all means try to clean out the disease, even if others about you have diseased bees. Some of the Colorado bee-keepers in regions diseased even with foul brood depend largely on keeping disease under by means of shaken swarms. Shaking a swarm upon foundation is of itself good treatment against any disease of the brood.

◆

Wants Brown or Black Queens—Holy Land Bees.

Where can I get some big brown or black queens, ½ dozen? My bees are getting so mixed up with the Holy Land bees. I have had an awful time with Holy Lands. They swarm, and swarm, and not a speck of honey from them. I cut 28 queen-cells out of one hive. They started to swarm in March. They crowd in the supers but only build a little comb and then swarm before they even fill the brood-chamber. No more *Holy Land* bees for me. I have tried them every way. Two colonies of blacks, that did not swarm last year, have given 236 pounds of comb honey. Originally they were wild bees, but they are more gentle than any golden or leather-colored ones around here. The golden Italians have never been known to go into a super in this place; they have been tried again and again, and now they are just as bad as the Holy Lands. I have 20 colonies of bees now, but could have had 100 colonies of Holy Land bees, if I had let them swarm all they wanted to.

The honey-flow is all over now, only a few days more, but I cannot complain, as my black bees did well; I think they would take the prize anywhere.

The wasps have commenced coming around, so I will have to make all the hive-entrances smaller, for they "get away" with a weak colony in a moment.

Honey is quoted at 11, 12 and 13 cents in San Francisco now.

I gave some of the old American Bee Journals to bee-keepers around here. I have learned a great deal more out of the Bee Journal than from all the books.
CALIFORNIA.

ANSWER.—I don't know where you can get the queens you inquire for, as it is hard now to find black or brown bees in their purity. If you did get them, very likely they would be no larger or better than the ones you now have. Possibly it might be worth your while to try the leather-colored Italians.

It is pleasant to know that you have learned more from the American Bee Journal than from all the books, yet after all that is not to the discredit of the books. No doubt you have learned all the more from the Journal just because you were first familiar with the books; and they are making a great mistake who are depending on the Journal without ever having read a single book of instruction about bees.

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FROM MANY FIELDS

Bees in Good Condition.

My bees are booming. They wintered well, as usual. So far, the prospects for a good honey crop are all that I can ask. Forty colonies are now in the best possible condition to take advantage of the sweet clover and alfalfa bloom, which will be on in about a week. On June 8 I had the first swarm issue, and since then 7 more came out. I am hoping, now that swarming is about over, that my bees will devote their energy to the gathering of honey.
WM. STOLLEY.
Hall Co., Nebr., June 20.

White with White Clover.

Bees are now doing nicely. The fields are white with white clover, and honey is going in at a great rate.
HENRY ALLEY.
Essex Co., Mass., June 20.

Not Much White Clover.

I have increased from 4 colonies to 10, and taken one super of honey from my best colony. But nectar is scarce; not much white clover in this section of country.
R. L. MCCOLLEY.
Wood Co., Ohio, June 21.

Heavy Loss of Bees from Poor Winter Stores.

Out of 350 colonies of bees in this town last fall there are not over 20 colonies left at this date. A very few years ago it supported from 2000 to 2500 colonies, and 40 years ago about that number. I don't believe the bee-business will ever cut any figure in this town again. It is not the winter that kills the bees, but poor honey. I will send you a sample of the honey-dew; it is half an inch deep all over my honey-house floor; it soured and run out of the combs where I packed up my hives. The bees will not touch the horrid stuff, nor can I get a new swarm to go into a hive with one frame in it on one side, and good clean combs with frames of brood for the rest. I am extracting the combs and washing them; when they get dry, and not very bad, I think I can use a few of them in a hive on top for extracting.

I found a few good colonies by driving 24 miles over into New York State, among farmers who kept them in box-hives. I picked what I thought were No. 1 from each lot, and they cost about $2 30 per colony, with 20 sections of new honey stored this year; some was all capped. The honey will sell for nearly enough to pay for the bees. They are swarming nicely. I did not get the last lot in time

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2 frame Nuclei (no queen)	2.00	11.00	22 00

When Queens are wanted with Nuclei add price of any Queen wanted. We guarantee safe arrival of all Queens and Nuclei. Our Breeders may be returned after 30 days if satisfaction is not given. Cash must come with all orders. Orders are booked and filled in rotation.

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Mr. Frank D. Gunderson, of Oconomowoc, Wis., says in a letter dated August 1, 1903: "I like your queens the best of any that I have ever had." This man placed an order last August for 24 Nuclei to be delivered this spring.
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CHARLES SCHILD, Ionia, Mich.
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to transfer, but will do that when the queen begins to pipe for a second swarm. If I don't hear her I will transfer in about 12 days from the first swarm.

I think we will have a good year, as the blossoms seem to hang on a long time. White clover is just coming out, and the bees are working on it—something we have not seen in years—and every basswood tree is going to bloom, even small ones growing beside larger trees.

Those colonies bought in New York State had none of that poor honey, and I found the best colonies on the high ground, and those left on the summer stands.

C. M LINCOLN.

Bennington Co., Vt., June 13.

[The sample of "sour stuff" came, and we must say it is the most villainous stuff we ever saw for honey. It is no wonder the bees died. It is almost black in color, and smells afar off. No wonder the bees died if they had to winter on such "sour stuff."—EDITOR.]

Shaken Swarms Without Shaking.

I should like to ask "Maine," the contributor of the article on page 411, "Shaken Swarms Without Shaking," if the bees can get sufficient ventilation through a Porter bee-escape board. This plan does not look feasible to me. I think that unless the colony was very light the bees would suffocate.

I read the American Bee Journal and like it very much. I get some valuable information from it.

H. VANDERWERP.

Missaukee Co., Mich., June 16.

Swarming and Mixing Up.

Bees are swarming again, and phenomenally mean about mixing up—and then, as a natural result, refusing to stay in any hive—or any other place. I have often wondered why my bees so uniformly ball queens whenever they get mixed, while others complain of it so little.

E. E. HASTY.

Lucas Co., Ohio, June 22.

Beedom Boiled Down

Daily Think.

Two bees or not two bees, that is the question;
Whether it were better to have one bee and a
honey-comb,
Or, by having two bees, get both the
Honey-comb and brush.

—Baltimore News.

The Honey Crop Prospect.

The outlook for a crop of honey throughout the irrigated regions is generally good, excepting in Arizona and New Mexico, where the almost total absence of snowfall and spring rains has practically blighted all chances for a crop of surplus honey this season. In Colorado the winter loss amounted to about ten percent, due very largely to queenlessness. The spring has been fairly favorable, and the colonies are in prime condition for the flow, which promises to open about June 15 Moisture conditions are highly satisfactory, the government station in Denver reporting a more than normal amount of precipitation since January 1. The only apparent drawback is, in some localities the alfalfa is badly winter-killed—not by cold weather, but by warm dry winds. Sweet clover is doing well, and in most localities is more than usually abundant. Conditions in Utah and Idaho are even better; the winter losses were trivial, and the few reports I have had indicate that the crop will be fully up to the average.

Viewing the situation as a whole, with the exceptions noted above, the outlook is very bright, and honey-buyers will not be disappointed if they depend upon shipments from

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the arid States for their supply of this toothsome sweetness.

I also believe that our bee-keepers will receive a fair price for their product, which, if the flow is good, and care is taken, will grade high. Considerable of last year's crop is still in the hands of dealers, but I note that it is nearly all "off grade," and will by no means complete with the new crop. In Colorado we export only the two grades, No. 1 and No. 2, and in the East they usually pass as fancy and No. 1. The "off grades" are either extracted or sold at home at a lower price.—H. C. MOREHOUSE, in Gleanings in Bee-Culture.

Bee-Keeping of the World.

United States, 4,500,000; Germany, 2,000,000; Austria, 1,800,000; Spain, 1,700,000; France, 1,000,000; Great Britian, 500,000; Holland, 250,000; Belgium, 200,000; Denmark, 100,000; Greece, 50,000; Switzerland, 30,000 colonies.

If these figures are correct, the United States may well arrogate to herself the proud title of "the greatest bee-country in the world." Just fancy a country producing honey which, loaded on cars, would make a train 25 miles long! Austria is undoubtedly one of the leading honey-producing nations, and excels in organization, for she has a bee-keepers' association numbering over 8000 members. Their income, amounting to over £1500 is augmented by a public grant of about £600, and they insure all bee-keepers irrespective of the number of colonies in their possession, for the small charge of less than 6d., guaranteeing to "make good any losses from foul brood, fire, theft, etc." In no other country on the continent, however, is agriculture so well organized or so successfully carried on as it is in Germany; and her bee-literatnre is second to that of no other country, while for scientific knowledge of bee-anatomy she stands an easy first.—British Bee Journal.

New Bee-Papers.

On an average, each year witnesses the birth of a new bee-journal; and, it might be added, the death of a journal. Of course, all journals cannot be equally valuable, but unless a new journal possesses some point of superiority, there is little hope for its success. Bee-keepers are slow in adding to their list a journal no better in *some* respect, than the ones they are already reading. If the main object of starting a bee-journal is to put money in the bank, disappointment will come as surely as night follows day. A man may hope to make a living publishing a bee-journal, but if

Langstroth on the
⁂ **Honey-Bee**
Revised by Dadant—Latest Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

The book we mail for $1.20, or club it with the American Bee Journal for one year—both for $2.00; or, we will mail it as a premium for sending us THREE NEW subscribers to the Bee Journal for one year, with $3.00.

This is a splendid chance to get a grand bee-book for a very little money or work.

GEORGE W. YORK & CO.
Dearborn Street, CHICAGO, ILL.

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Root's Goods at Root's Prices.
Everything used by Bee-Keepers. POUDER'S HONEY-JARS.
Prompt Service.
Low Freight Rates. NEW CATALOG FREE.
WALTER S. POUDER,
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Please mention Bee Journal when writing

Bee-Keepers!
Send for our FREE CATALOG. It will tell you how to put foundation in four sections at once; and the only way to get a full section of honey
We sell SUPPLIES AT FACTORY PRICES.
A. COPPIN, Wenona, Ill.
4Atf Please mention the Bee Journal.

FOR SALE!
100 Colonies of Italian, Carniolan and their Cross, in 8 frame dovetail hives—full colonies at from $5 00 to $6.00 per colony. Address,
LOUIS WERNER, box 387, Edwardsville, Ill.
23A4t Please mention the Bee Journal

Fourth of July.
One fare for the round-trip, plus 25 cents, July 2d, 3d and 4th, within 200 miles from the starting point on Nickel Plate Road. Return limit July 5th. Chicago Depot: LaSalle and VanBuren Sts. City Ticket Offices, 111 Adams St., Auditorium Annex. Telephones, Central 2057, and Harrison 2208.
9—24A4t

WE SELL ROOT'S GOODS IN MICHIGAN
Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Beeswax Wanted for Cash.
M. H. HUNT & SON,
BELL BRANCH, WAYNE CO., MICH.
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BEE-KEEPERS!
Don't forget that we are the largest jobbers in the Uuited States of
ROOT'S BEE-SUPPLIES,
Johnson Incubators and Brooders,
Humphrey's and Mann's Bone-Cutters,
Poultry Supplies of all Kinds, Seeds and Implements.
Remember, you get these goods at Factory Prices, and save half the freight.
Let us book your order for Golden Italian, Red Clover and Carniolan QUEENS; listed in our Catalog. Send for Free Illustrated Catalog.
GRIGGS BROS., 521 Monroe St., TOLEDO, OHIO.
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Marshfield Manufacturing Co.
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THE MARSHFIELD MANUFACTURING CO., Marshfield, Wis.
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Complete stock for 1904 now on hand. Freight-rates from Cincinnati are the lowest. Prompt service is what I practice. Satisfaction guaranteed. Langstroth Portico Hives and Standard Honey-Jars at lowest prices.
You will save money buying from me. Catalog mailed free. Send for same.
Queens Now Ready to Supply by Return Mail.
Golden Italians, Red Clover and Carniolan Queens, Untested, during June, 1, 75c.; 6, $4.00; 12, $7.50.
C. H. W. WEBER,
Office and Salesrooms—2146-48 Central Ave.
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CINCINNATI, OHIO.
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he wishes to measure his success in dollars and cents, he may choose from many other fields more fruitful in that direction. The making of money in a legitimate manner is honorable, but an editor, like a teacher, a physician, or a clergyman, must have another and higher object—that of doing good.—Bee-Keepers' Review.

Propolis for Healing.

When first I went into the bee-business, probably the second year, with Mr. D. A. Jones, some one told me of the healing properties of propolis, and I made a salve for years. This summer I advised a bee-keeper, who had a lot of propolis, to make some of the salve and sell it; but probably he considered it would be difficult to impress the people with its virtues, and did not make any. The preparation is made by heating olive or sweet oil and propolis. Enough oil must be put in to make a paste that will readily spread when cool. If too hard, add more oil. An insoluble brown residue will be left when thoroughly heated. This must be removed by straining or dipping when hot. That is all about it. The salve is excellent, and it would be well for every bee-keeper to have some of it in the house; and, more, I believe that where once a customer is obtained there will be no difficulty in more being required when the first stock is exhausted.—R. F. Holtermann, in Gleanings in Bee-Culture.

Bottom Feeder — How and What to Feed.

To know *how* to feed, so there will be *no* robbing, and not a *spoonful* lost, even if you feed a ton of it, and not lose any heat from the hive or drown a single bee, or kill one in any way—I have tried nearly every feeder that has ever been described in the bee-journals and bee-books, and several different ways of my own, and can find nothing that will fill all requirements at all times like the following:

Take some 2x4 scantlings, either hemlock. basswook or pine, cut them in pieces 4 inches

DEATH TO LICE.

LICE SAP LIFE

That's how they live and thrive. You can't have healthy, profitable fowls or stock and have lice too. Let

Lambert's Death to Lice

take care of the vermin and you will be more busy taking care of the profits. Makes sitting hens comfortable. Sample 10 cents; 100 oz., $1.00 by express. "Pocket Book Pointers" free.

O J. Lambert, Box 707, Apponaug, R. I.

For Sale.

50 or more colonies of **BROWN BEES** in Langstroth-Simplicity hives, made of dressed cypress and painted, with Langstroth frames—all standard size. Will take $3.00 per strong colony as they stand. Address for information,

JOHN KENNEDY, Selma, Miss.

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Send for our large illustrated Catalog.
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Wanted — Bee-Keepers

To write for our prices on **SECTIONS.** We manufacture them, and are **dealers in BEE-SUPPLIES.** Send for special price and Catalog.

AUG. LOTZ & SON,
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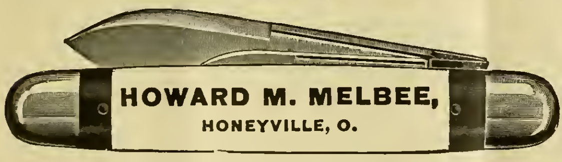
The Novelty Pocket-Knife.

Your Name and Address on one side—Three Bees on the other side.



[This Cut is the Full Size of the Knife.]

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last-time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your Pocket-Knife will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us Three New Subscribers to the Bee Journal (with $3.00.) We will club the Novelty Knife and the Bee Journal for one year, both for $2.00.

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☞Please allow about two weeks for your knife order to be filled.

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Money in Bees for you.
Catalog price on

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Catalog for the asking.

F. H. FARMER,
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Up First Flight.

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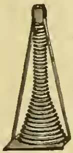
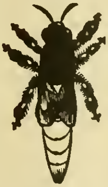
Queen-Clipping Device Free!



The Monette Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. It is used by many bee-keepers. Full printed directions sent with each one. We mail it for 25 cents; or will send it **FREE** as a premium for sending us One New subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,

GEORGE W. YORK & CO.,
CHICAGO, ILL.

ITALIAN QUEENS,
BEES AND NUCLEI.



Choice home-bred and Select Imported Stock. All Queens reared in full colonies.

One Untested Queen	$. 90
" Tested Queen	1.10
" Selected "	1.40
" Breeder "	2.20
" Comb Nucleus (no Queen)	1.10

All grades ready now. Safe arrival guaranteed.

For prices on quantities and description of each grade of Queens, send for free Price-List.

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10 CENTS A YEAR.

The Dixie Home MAGAZINE, largest, brightest and finest Illustrated Magazine in the world for 10c a year, to introduce it ONLY.

It is bright and up-to-date. Tells all about Southern Home Life. It is full of fine engravings of grand scenery, buildings and famous people. Send at once. 10c a year, postpaid, anywhere in the U.S., Canada and Mexico. Six years, 50c. Or, clubs of 6 names, 50c; 12 for $1. Send us a club. Money back if not delighted. Stamps taken. Cut this out. Send to-day. THE DIXIE HOME,
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ANOTHER

CAR=LOAD

of Hives, Sections, and Supplies of all kinds just arrived from G. B. Lewis' Factory, and are ready to fill orders quick. Send us your orders for everything. We have it.

Louis Hanssen's Sons
DAVENPORT, IOWA.

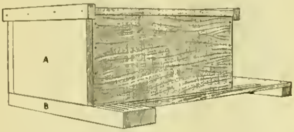
5A26t Please mention the Bee Journal.

onger than the hive is wide, outside measurement. My bottom-board is 1¾ inches thick, counting the cleats across the front and back, so I dress the scantling down to 1¾ inches thick. After being cut up the pieces are held over a buzz-saw with a little wabble to it, so that it cuts a groove about ½ inch wide. These grooves are cut to within about ⅛ of an inch of going through, and to within ½ inch of each end. I put four such grooves in each piece, leaving a thin piece between the grooves, then take a sharp chisel and cut a little out of each piece so that the syrup can run into all the grooves alike. I then fill them with hot paraffin or beeswax, leaving it a few seconds so as to give them a good coating inside to prevent the syrup from soaking into the wood. Next give them two good coats of paint, and we have feeders that have cost about 6 cents each, and will last 20 years or more.

When I look over the colonies in the apiary, I put one of these feeders at the back end of the bottom-board of each hive, placing it so that the top of the feeder will be on a level with the top of the bottom-board; then draw back the hive over the feeder, so it will be flush with the back of the feeder, the other end of the feeder projecting four inches to one side of hive. I then take a pail having a spout, and pour in the feed, being careful to have the hive set level. When the feeder is full I lay a block of 2x4 across the feeder where I have poured in the syrup, and the job is done. The odor of the warm syrup will rise up in the combs, and the bees will at once find the feed, and clean out a feeder full in 30 minutes.

If you want to feed in the fall for wintering, put two or three feeders under the hive, in the same way, and give them all they require in one day. Of course, in the fall, you must feed much thicker syrup than in the spring.

If you have the syrup handy in the yard you can feed 200 colonies in less than an hour, and not kill the bees, or lose any heat from the hive. I have fed tons of syrup in this way, and have never had one colony robbed.



BEE-HIVE ARRANGED FOR FEEDING WITH A BOTTOM FEEDER.

A is the back end of the hive. B is the feeder in position. The dotted lines indicate the block used for covering that portion of the feeder where the feed is poured in.

I would advise you to leave the feeders under the hives all summer, as they are not in the way, and when, from any cause, the bees cannot get honey from the flowers, you can easily give them a little syrup; and many times save their brood, which I have seen destroyed in large quantities during cold, wet spells of weather.

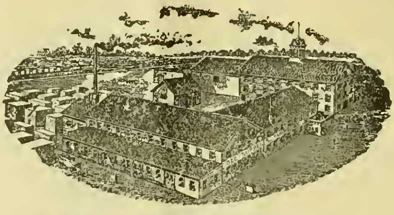
This loss of brood is a *sad sight* for a bee-keeper, especially when he wants strong colonies backed up with hives full of maturing brood, so I repeat, leave the feeder under the hive all summer, and when the cold, wet spells do come, give them a little syrup. A very little will many times save their brood, and the bees will go for the flowers with a rush as soon as the weather warms up a little—much faster than if they had lost their brood.

And now what to feed is well worth consid-

Honey SOLD AND Beeswax BOUGHT

When you run short of Honey to supply your local trade, write to us for prices. We offer it in 60-pound tin cans, 2 cans in a box. Purity guaranteed. We pay cash for pure Beeswax. Price quoted on application. Address,

THE YORK HONEY CO.
HENRY M. ARND, Mgr
101 E. Kinzie Street, CHICAGO, ILL.



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BEE-SUPPLIES!

We carry a large stock and greatest variety of everything needed in the Apiary, assuring BEST goods at the LOWEST prices, and prompt shipment. We want every bee-keeper to have our FREE ILLUSTRATED CATALOG, and read description of Alternating Hives, Ferguson Supers, Etc. Write at Once for Catalog.

AGENCIES.
Kretchmer Mfg. Co., Chariton, Iowa.
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Shugart & Ouren, Council Bluffs, Iowa.
Fulton & Ford, Garden City, Kan.
I. H. Myers, Lamar, Colo.

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OUR HIVES AND SECTIONS

Are Perfect in Workmanship and Material.

By sending in your order NOW, you will SAVE MONEY, and secure prompt shipment.

PAGE & LYON MFG. CO., New London, Wis. U.S.A

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STANDARD BRED QUEENS.

BUCKEYE STRAIN RED CLOVER.
GOLDEN ITALIANS. CARNIOLANS.

By Return Mail. Safe Arrival Guaranteed.

PRICES.	ONE	SIX	TWELVE
Untested	$0.75	$4.00	$7.50
Select Untested	1.00	5.00	9.00
Tested	1.50	8.00	15.00
Select Tested	2.00	10.00	18.00

Select Breeders, each $3.00
Two-frame Nucleus and nice Queen 3.00

THE FRED W. MUTH CO.,
No. 51 WALNUT ST., CINCINNATI, OHIO

Some Apiary Stock at a Bargain!

We offer for sale, from our stock of bee-supplies, the following list, some of which is new and the balance as good as new:

20	Wood-bound 10-frame Zinc Honey-Boards	15c each.
1080	New, Clean, Wired Extracting Combs (L. size)	15c each.
420	New L. Brood Frames with full sheets wired foundation	10c each.
400	Good L. Brood-Combs	12c each.
1	"New Model" Solar Wax-Extractor (glass 26x60 in.)	8.00.
1	Wooden Honey-Tank with galvanized iron bottom (holds 1800 lbs.)	10.00.
1	6-inch Comb Foundation Mill	15.00.
1	10-inch Comb Founnation Mill	25.00.
100	New L. 10 fr. Dovetailed Hives (each consisting of a Body, Cover and Bottom-Board—all nailed)	95c each.

If you order Combs and Hives, the Combs can be put right into the hives and shipped in that way. All the above can be shipped promptly, so long as they last. First come, first served. What do YOU want out of the lot? or do you want it all? (No order filled for less than $5.00 from the above list.) Also BEES AND QUEENS, and Stanley Queen Incubator. Send for free Circular

Address, ARTHUR STANLEY, DIXON, ILL.

BEEKEEPERS SUPPLIES

Root's Goods FOR IOWA

And the West
At Root's Factory Prices.

18 years in the Supply Business has put us in the lead for everything in our line.

OUR NEW BUILDING, just completed, is filled with the largest stock of Supplies ever carried in the West.

We are centrally located, and have every facility for handling business with dispatch, and our shipping facilities are the best.

Write to-day for 1904 Catalog. Address,

JOS. NYSEWANDER,
565 & 567 W. SEVENTH ST. DES MOINES, IOWA

15At2t Please mention the Bee Journal.

ering. I have tried all the cheaper grades of sweets, and find nothing as cheap, all things considered, as granulated sugar. If you have a little extracted honey to mix with it, the bees will like it some better. To have the best results, make it very thin, about like the nectar as gathered from the flowers, and feed it quite warm.—E. W. ALEXANDER, of New York, in Bee-Keepers' Review.

Bee-Keeping at the St. Louis Exposition.

The St. Louis Exposition has not done very much for bee-keepers, but who is to blame we are not able to say. There was an opportunity offered for one of the largest and grandest displays of this kind that was ever known on earth had the matter been taken up early last year, and some one put in general charge who was widely know among bee-keepers, and who had had extended experience along the line of apiarian exhibits. The display would have proved a drawing card for the exposition, not only among the 400,000 bee-keepers in the United States, but among those of other lands, and would have resulted in untold benefit to the industry. As it is, the honey and apiarian display is a kind of a farce. It is off at one side, poorly equipped and overshadowed by other things deemed more important, if not more attractive.

Colorado will have a fine display in charge of Senator Swink, which is located in the basement part of the Horticultural Building. California has a fine one of extracted honey located in the Agricultural Building, where the entire exhibit should have been located. Utah also has a very attractive exhibit of extracted honey in the same place, and there may be other States which have good displays in connection with their State exhibit, but we did not have time to hunt them up.

In the Horticultural Building the A. I. Root Company is setting up a neat, attractive display of apiarian supplies, but when we were there, some one who had an exhibit in front of it was erecting a barrier about ten feet high, so it will be hard to find when the other display is completed. Mr. Danzenbaker, who is in charge of the Root display, told us that the space next to it was to be occupied by an exhibit of bees, etc., which Senator Swink proposed to set up, but this space already had a board fence in front of it so high that no one could see over it, so it would take a police detective to find the Senator's bees, should he locate them in this place. The lady superintendent seems to be a very excellent, hard-working woman, and is doing all she possibly can to help the departments along, but she evidently lacks experience sufficient to handle such an undertaking. This, however, is not the most serious trouble. She is forced to "make bricks without straw," and the most skilled expert in the land could not get together a creditable apiarian display under the circumstances. First, the location is about as poor as could be; second, last year early in the season was the time to begin a work of this kind; and last, but not least, there is not money enough and push enough back of this display to guarantee success, even though the location was a good one, and the matter had been taken up at the proper time. The honey and bee display at the St. Louis Exposition is bound to prove a failure. Missouri does not have any honey display at all, to her own discredit be it said, as she produces as fine honey as can be found anywhere in the land.—Modern Farmer and Busy Bee.

CONVENTION NOTICE.

Texas.—The Texas State Bee-Keepers' Association will meet at College Station, Tex., Tuesday, Wednesday and Thursday, July 5, 6 and 7, 1904, beginning at 10 a.m. on Tuesday. This will be during the meeting of the Texas Farmers' Congress, so it will be a great time. Railroad rates and board will be cheap.

The convention will open at the time named. Come early and take part.

LOUIS H. SCHOLL, Sec.

College Station, Tex.

Observatory Hives!

After dealing in Bee-Supplies for a number of years, I am led to believe there is a demand for practical Observatory Hives holding 5 or less of the common L. frames, with glass sides, 10x20, protected with 2-hinged doors. For price and particulars write to N. W. TIFFANY,

26A2t 72 Fairview Ave., BINGHAMPTON, N. Y.

40 Years Among the Bees,

BY DR. C. C. MILLER.

Free as a Premium for Sending Two New Subscribers.

The book contains 328 pages, is bound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with over 100 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard.

The first few pages of the new book are devoted to an interesting biographical sketch of Dr. Miller, telling how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters, and shows in minutest detail just how Dr. Miller does things with bees.

HOW TO GET A COPY OF DR. MILLER'S "FORTY YEARS AMONG THE BEES."

The price of this new book is $1.00, post-paid; or, if taken with the WEEKLY **American Bee Journal** for one year, BOTH will be sent for $1.75.

Or, any present regular subscriber to the American Bee Journal whose subscription is paid in advance, can have a copy of Dr. Miller's new book *free as a premium* for sending us **Two New Subscribers** to the Bee Journal for one year with $2.00. This is a magnificent offer, and should be taken advantage of at once. For many of our readers it is not only an easy way to earn a copy of the book, but at the same time they will be helping to extend the subscription list of the old American Bee Journal, and thus aiding also in spreading the best kind of apicultural information among those who would be successful bee-keepers.

Address all orders to

GEORGE W. YORK & CO.,
334 Dearborn Street, CHICAGO, ILL.

HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, May 9.—The market has an oversupply of comb honey, very little of which will pass as No. 1 grade—price is 11@12c per pound, and off grades at a corresponding value. Extracted, 6@7c per pound for best grades of white; amber colors, 5@6c per pound Beeswax, 30@32c. R. A. BURNETT & Co.

CINCINNATI, O., June 18.—Since warm weather set in, hardly any sales of comb honey are made; what little there was sold, was fancy white and brought from 12½@13½c. Extracted has a fair demand, as follows: Amber, in barrels, from 5¼@5¾c; in cans, ½c per pound more; alfalfa, 6½c; fancy white clover, 7½c. Nice yellow beeswax, 30c. C. H. W. WEBER.

ALBANY, N. Y., June 3.—The honey market is very dull now, and prices nominal Receipts are very light and demand the same. We quote comb honey, in good order, white, 13@15c; mixed, 12@13c; dark, 10@12c. Extracted, buckwheat, 5½@6c; mixed, 5½@6c; white, 6½@7c. Beeswax, 30@32c. H. R. WRIGHT.

CINCINNATI, June 15.—The demand for honey is slow for this season of the year, which is due to the vast quantities that were held over from last season, and the importation of Cuban honey. We quote amber in barrels and cans at 5¼@6½c; white clover, 6¼@8c. Beeswax, 30[illegible]
THE FRED W. MUTH CO.

BOSTON, May 14.—The demand for honey is extremely light, almost nothing, and supplies are heavy for this time of the year, and our prices therefore are largely nominal. We quote fancy white at 15@16c; A No. 1, 14@15c and No. 1, 14c, with no call for under grades. Extracted, from 6@7c. BLAKE, SCOTT & LEE.

KANSAS CITY, June 15.—The market is about cleaned up on old honey, the last selling for $2.75 per case. We expect our first shipment of new stock in next week, and will sell same at $3.25 per case; we have been receiving letters from all of our honey-shippers, from which we gather that the crop in Iowa and Missouri runs from fair to good. Old extracted honey meets with very slow sale. Beeswax in good demand at 30c. C. C. CLEMONS & Co.

NEW YORK, June 21.—Very little demand for comb honey. Some trade for No. 1 and fancy white, at from 12@13c, while dark and amber are almost unsalable. Extracted is in fair demand, although prices are irregular. We quote from 5@6½c, according to quality. Southern in barrels, at from 50@55c per gallon.

Beeswax more plentiful and prices are gradually declining. We quote 28@29c.
HILDRETH & SEGELKEN.

PHILADELPHIA, June 20.—It is just between seasons now with comb honey. No sales reported and nothing doing. Our commission markets are at the height of the berry season, and there are few sales made in extracted honey for manufacturing purposes. We quote: Fancy white extracted, 7c; amber, 6c. Beeswax is declining; 28c for best yellow.

We are producers of honey and do not handle on commission. WM. A. SELSER.

SAN FRANCISCO, June 15.—White comb, 1-lb. sections, 12½@13c; amber, 9@11c. Extracted, white, 5½@6c; light amber, 5@5¼c; amber, 3¾@4¼c; dark amber, 3¼@3¾c. Beeswax, good to choice, light, 28@30c; dark, 26@27½c.

There are no heavy spot supplies of any description, and especially is choice to select, either comb or extracted, in quite limited stock. Demand at present, however, is not active.

HONEY AND BEESWAX

When consigning, buying or selling, consult

R. A. BURNETT & CO.,
199 SOUTH WATER ST. CHICAGO, ILL.

WANTED! FANCY COMB HONEY

In no-drip shipping-cases. Also Amber Extracted in barrels or cans. Quote your best price delivered Cincinnati. The Fred W. Muth Co.

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I. J. STRINGHAM, 105 Park Place,
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Manufactures and carries in stock every artice a bee-keeper uses. BEES AND QUEENS IN SEASON.
Apiaries—Glen Cove, L.I. Catalog free.

ST. LOUIS, 1904.

Bee-Keepers' Supplies Galore.

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A No. 1 Smoker by mail, $1.

Bees, Honey and Beeswax bought and sold for cash.

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Are pouring in, but we are filling them (almost every single one) within a few hours after they are received. We can ship

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Shipping Facilities Unequaled Anywhere.

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I ARISE

To say to the readers of the BEE JOURNAL that

DOOLITTLE...

has concluded to sell QUEENS in their season during 1904, at the following prices:

1 Untested Queen ..	$1.00
3 Untested Queens..	2.25
1 Tested Queen	1.25
3 Tested Queens	3.00
1 select tested queen	1.50
3 " " Queens	4.00
Select Tested Queen, last year's rearing,	2.50
Extra selected breeding, the very best..	5.00

Circular free, giving particulars regarding each class of Queens, conditions, etc. Address,

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We Guarantee Satisfaction. What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS. PATENT WEED-PROCESS SHEETING.

Why does it sell so well? Because it has always given better satisfaction than any other. Because in 26 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material.
We sell the best Veils, cotton or silk.

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Langstroth on the Honey-Bee—Revised
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

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WHERE YOU BUY YOUR
BEEWARE
WATERTOWN LEWIS U.S.A.
MAKES THE FINEST

G. B. Lewis Company
Watertown, Wisconsin, U.S.A.
Send for Catalog.

AMERICAN BEE JOURNAL

44th Year. CHICAGO, ILL., JULY 7, 1904. No. 27.

Apiary of Geo. A. Reed, of Saline Co., Kan.

Apiary of Frank Hinderer, of Schuyler Co., Ill.

(See page 468)

"Crystal Apiary," belonging to Peter N. Duff, of Cook Co., Ill.

LABOR-SAVING DEVICES.

Cowan's Honey-extractor.

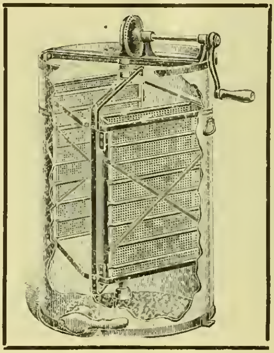
During the last few months considerable time has been spent on the improvement of the Reversible Extractor. The arms of the reel are made of regular channel iron, with a hub formed of sheet metal riveted together, making the reel stronger, and lighter in weight. By the use of planed teeth on the bevel gear it produces less noise, and makes the machine run easier. We make them in the following sizes for L. frames:

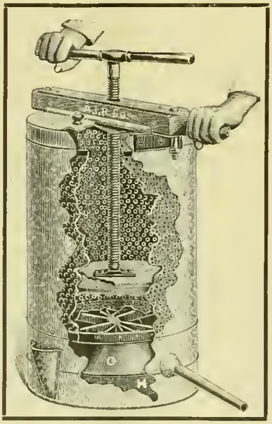
No. 20—Two-frame, 24-inch can	*$16.00*
No. 25—Four-frame, 28-inch can	*23.00*
No. 30—Six-frame, 31-inch can	*30.00*

Many other sizes and styles.

"We have used quite a number of extractors in our work, and find that it pays to keep up with the times and use the latest improved styles, and now use the COWAN. For general use the four-frame extractor gives the best results. There is no doubt but a two-frame extractor could be worked to advantage in a large apiary. It is certainly a fact that, in a two-frame extractor, the combs are so near the center, the labor of turning the machine is trifling."

"Old Grimes" in the *American Bee Journal.*





The German Steam Wax and Honey Press.

We feel that we have filled a long-felt want by offering this Wax and Honey Press. By putting in the combs and applying pressure, all the honey can be obtained from them. Then by applying steam and more pressure the wax can be drawn off, thus obtaining all that is possible from your combs. The same machine can also be used for an uncapping-can. It is something every bee-keeper should own. Made in only one size. **$14.00**

Foul-Brood Inspector McEvoy, of Canada, Says:

Woodburn, Ontario, Apr. 25, 1904.

Friend Root :—Your wax-press received and tested. It is certainly one of the best and most profitable articles ever gotten up for the benefit of bee-keepers, and will soon go into use in every section where bees are kept.

Yours very truly, Wm. McEvoy.

Send for Catalog. - - Extractors and Presses in Stock at Branches and Principal Agencies.

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BEE JOURNAL
Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor. CHICAGO, ILL., JULY 7, 1904. Vol. XLIV—No. 27.

Editorial Comments

JULY.

There's a low, excited murmur in the branches of the trees;
There's a note of expectation in the humming of the bees;
The corn flings out its pennants and reaches toward the sky—
And, to the mowers' merry song, is ushered in July.

All Nature turns to greet her, the fair mid-summer queen,
And swift before her magic wand, the gold supplants the green.
She bends above the meadows; her touch is on the grain;
And harvest time is come once more to valley, hill, and plain.

In her hand she holds fruition of the promises of Spring,
A gracious benediction from the Palace of the King.
When her smile is resting on you, then be thankful to the Lord,
For her blessing and her favor are the farmer's sweet reward.

—Farm Journal.

The National Association and Honey Advertising.

It seems that the agitation that was begun a year or two ago at the Denver convention, looking toward the National Bee-Keepers' Association doing something about advertising honey as food for daily consumption, promises to result in something tangible in the not distant future.

Mr. Dadant, on another page, gives his views on the subject, and also urges the National to make an exhibit at the St. Louis Exposition. In his article, he mentions having referred it to Mr. France, who replied as follows:

MR. C. P. DADANT:—Your article is all right, and I approve its ideas. I fear, however, it is too late for an exhibit at St. Louis; and so many being short on the 1904 honey crop also cuts a figure. I do feel that the National must do something soon in the way of advertising and helping on honey marketing. I have been quietly trying several plans, some that will work perfectly providing each producer, and afterwards dealers, would be honest with themselves and the Association. To test my plans, I have lately purchased several thousand pounds of honey and sold it, and by so doing saw how quickly some will take advantage of it, if the National establishes a brand. Our markets to-day are not half what they might be if the confidence of the public in honest goods can be had; also, the superior value of pure honey as food needs advertising. Seeing the State honey show so poor at St. Louis is why, at my own expense, I am getting up this State honey display of one-pound bottles, every kind of honey each State produces. And I hope during the winter, in my lectures at institutes, to use some of the same to illustrate why all honey does not look or taste alike.

Our 435 colonies of bees have hardly enough clover for their living; no show before basswood. N. E. FRANCE.

Our suggestion would be that at the convention in St. Louis, in September, this whole subject of advertising honey be thoroughly discussed, and then appoint an able committee to prepare a plan which shall afterward be submitted to the Board of Directors, and on their approval put into effect.

Also, as to the National taking up the matter of handling or branding the honey of its members—we think that is a matter that needs careful consideration. It's a big subject, and requires the exercise of much wisdom to handle it properly. Better go rather slowly on that, is our judgment, until sure of being on the right track.

Beeswax as a Solder.

If a watering-can or other vessel in which nothing hot is to be put has a leak, try beeswax as a solder. Warm over the stove the spot to be mended, warm also the wax and put a bit of it flattened out on each side the hole, then press firmly together. Perhaps propolis (wasn't it Hasty that recommended propolis?) is still better.

Nebraska State Fair Apiarian Exhibit.

This great annual Fair will be held at Lincoln, Aug. 29 to Sept. 2, 1904. The part which will likely interest our readers most is the apiarian exhibits, for which the following list of premiums are offered:

BEES AND HONEY—OPEN TO THE WORLD.

	1st Pre.	2d Pre.	3d Pre.
Best comb, basswood or white clover honey, not less than 20 pounds, cased and in single-comb sections, weighing not more than 2 pounds each....	$5 00	$2 00	$2 00
Best alfalfa honey, the same amount and cased as above....	5 00	3 00	2 00
Best sweet clover honey, the same amount and cased as above....	5 00	3 00	2 00
Best fall honey, the same amount and cased as above	5 00	3 00	2 00
Best 20 lbs. extracted white clover or basswood honey	5 00	3 00	2 00
Best 20 lbs. extracted alfalfa honey....	5 00	3 00	2 00
Best 20 lbs. extracted sweet clover honey....	5 00	3 00	2 00
(The above to have been extracted previous to July 1.)			
Best 20 lbs. heartsease fall honey, to have been stored after Aug. 1....	5 00	3 00	2 00
Best 20 lbs. extracted alfalfa fall honey, to have been stored after Aug. 1....	5 00	3 00	2 00
Best 20 lbs. extracted sweet clover fall honey, to have been extracted after Aug. 1....	5 00	3 00	2 00
Best and largest display by any one, including bees, extracted and comb honey....	15 00	10 00	5 00
Best and most artistic designs in beeswax....	7 00	5 00	3 00
Best exhibit of apiarian supplies and implements....	15 00	10 00	5 00
Best display of honey in marketable shape, products of exhibitor's own apiary....	15 00	10 00	5 00
Best display of honey-candy, honey-sugar, and sweets, by any one, in which honey is made to fill the place of sugar....	3 00	2 00	1 00
Best honey-vinegar, not less than ½ gallon....	3 00	2 00	1 00
Best display of bees and queens in observatory hives, and not allowed to fly, not less than five cages..	10 00	5 00	3 00
Best exhibition of extracting honey, to be exhibited on the grounds, under the direction of the Superintendent, not later than Thursday of the Fair..	3 00	2 00	1 00
Best honey-extractor, test to be made by actual extracting upon the ground....	3 00	2 00	1 00
Best all-purpose single-walled hive....	3 00	2 00	1 00
Best all-purpose chaff hive....	2 00	1 00	50
Best bee-smoker....	1 00	50	25
Following confined to exhibitors in Nebraska alone:			
Best display of apiarian implements and supplies, including comb foundation drawn, and bees in cages, not less than five cages....	10 00	5 00	3 00
Best report of surplus honey stored by any colony of bees during the year 1904, amount of stores, manner of building up, handling, kind of hive used, kind and quality stored, to be verified by owner. Entries to conform with other entries of this class, and report, with verification, to be filed with			

Superintendent not later than noon on Tuesday of the Fair 5 00 3 00

COUNTY COLLECTIVE EXHIBITS.

The county in Nebraska showing the best collection of honey of all kinds, any or all ages, shapes and conditions 20 00 10 00 5 00

The exhibits must have been produced in the county exhibiting, and the product of not less than five apiaries. Individuals composing this collective exhibit may compete for any or all minor premiums offered.

HONEY PRODUCING PLANTS.

Best collection of honey-producing plants, giving time of blossoming, with common and proper names. 7 00 4 00 2 00

DISCRETIONARY.

In this lot make entries, when desired, of what is not provided for in the foregoing lots in this class.

Hon. E. Whitcomb, of Friend, Nebr., is the superintendent of the apiarian department of this Fair. He will be pleased to furnish any further information that may be desired, if so requested.

Beginners' Big Honey-Yields—Why?

Now and again some beginner reports an unusual yield per colony, and the question is raised, "Why should one new to the business succeed better than one of more experience?" The answer has been given that it is because of the greater enthusiasm of the beginner. But some of the veterans tell us that they have no less enthusiasm now than during their first years in the business. Besides, it is hardly reasonable that enthusiasm shall outweigh skill and experience. Is it so in other callings?

A probably better answer is that the beginner has a smaller number of colonies. But why should that make so much difference? For the simple reason that with a larger number it is easier for the locality to be overstocked. The amount of honey consumed in a year by a colony has been variously estimated at from 60 to 200 pounds annually the larger amount probably being nearer the truth, the greatest consumption occurring during the time of greatest activity, or when the bees are at work in the field.

In most localities one, two, or three principal sources of nectar furnish all the surplus, although there may be numerous honey-plants yielding a small quantity of nectar from spring to fall. These minor sources, however, are not sufficient for the daily needs of an apiary of 50 or 100 colonies, so that during the greater part of the time the bees get only enough for their daily needs, if indeed they do not draw on the reserve stores. With only two or three colonies on the ground, there might be enough nectar, not only to supply the daily needs, but to afford a chance for the daily storing of nectar throughout the season. With a whole summer in which to store, instead of a few days or weeks, why should there not be an extraordinary yield per colony?

The chief moral in the case is that the beginner who gets a large surplus from one or two colonies should not base his future expectations thereon, for, should he do so, disappointment will likely be in store for him.

Miscellaneous Items

The Apiary of Geo. A. Reed is shown on the first page. He writes as follows concerning it:

About five years ago a stray swarm of bees came to my place and I hived it. As I had no smoker, and had never heard of a bee-veil, I had a pretty tough time of it. Part of the time my face was swollen up so that my wife did not know me. But that winter I came across "A B C of Bee-Culture." and from that time on the bees and I have gotten along nicely. But the greatest help I have had has been the American Bee Journal. Whenever I want to learn anything now I find it without much trouble in the "Old Reliable." Just continue my paper for life, and whenever you need any money send me your bill.

Last year the floods washed away many of the bees, but I saved my bees by taking them to high ground. I got 72 pounds from the last crop of alfalfa, which I sold at 16 cents a pound, so you see I had something for my trouble. Bees are swarming, and I think we will have a good year.

I send a photograph of my apiary and myself, taken by J. A. Ward. My little daughter is standing out in front of the hives.

Geo. A. Reed.

Bee-Hive in His Bedroom.—The Lincoln (Nebr.) Daily Star published some time ago an account of a colony of bees kept in the bedroom of Mr. J. H. Sears, who has had them there for over 18 months, and evidently enjoys their happy hum. Last season he is reported to have taken 60 pounds of honey from them. Continuing the account, the Star reporter has this to say:

"While visiting in the country in the summer of 1902, a daughter of Mr. Sears found a swarm of bees in a hedge. They seemed to belong to no one, and when she returned home she informed her father. The latter used to keep bees on the farm, and at once saw the possibilities of the "find" his daughter had made. At the same time he did not take into consideration the fact that he had no adequate place to keep them when he had brought them home. When he had obtained the swarm, captured in a cracker-box, he discovered that his back-yard was far too small to accommodate his pets. The only possible place for them was in the bedroom where he slept.

"Mr. Sears leaves his window slightly open, to allow the bees entrance and egress at will. An up-to-date hive is placed for their occupancy, with all the comforts of the out-of-door apartments, with the addition of hard-coal heat in the winter.

"At almost any hour the sill of the window may be seen partially covered with the dark yellow insects, crawling in or out of the room where is their hive."

The Apiary of Frank Hinderer appears on the front page this week. When sending the picture (May 28) he wrote as follows:

I send a photograph of my home and apiary, my wife, boy, and myself. I commenced in the spring of 1903 with 8 colonies, increased to 33 by natural swarming, and having a honey-flow of 52 days, my surplus was 1000 one-pound sections, and 1640 pounds of box-honey. I use boxes holding from 2½ to 10 pounds each. I had 4 colonies in Langstroth hives, and the rest in box-hives. I had 2 swarms come out on Aug. 4 and unite, and they stored a surplus of 155 pounds in one-pound sections. I received 11 cents per pound for my honey. I bought 19 colonies in the fall in box-hives, making 52 colonies. I lost 13 colonies the past winter and spring, or 25 percent of them.

We are having nice weather now, and bees are getting strong. There is good prospect that there will be lots of white clover, and also sweet clover and basswood bloom.

I could not get along without the American Bee Journal.

Frank Hinderer.

Some Expert Opinion

"In the multitude of counsellors there is safety."—Bible.

Frames Hung Crosswise vs. Lengthwise.

If for some reason you were to start in anew to keep bees, and were obliged to get an entirely new outfit—

Ques. 10.—What objections would you find to frames hung crosswise of the hive?

O. O. Poppleton (Fla.)—I don't know, as I have never tested them.

S. T. Pettit (Ont.)—It interferes with free ventilation, and free passage of the bees to all parts of the hive.

G. M. Doolittle (N. Y.)—Answered by asking, What objections would you find to frames hung lengthwise of the hives?

J. M. Hambaugh (Calif.)—I am not sure that there are any objections, but I have not practiced this feature extensively.

R. L. Taylor (Mich.)—There are more of them, and more motions are required to handle them, with no advantage except to coddle weak colonies.

Prof. A. J. Cook (Calif.)—None, except they are not the Langstroth, and that hive and frame are most desirable because most used. See answer to Question No. 1.

Geo. W. Brodbeck (Calif.)—Here in California this would indicate a narrow frame and more to handle in comparison with the Langstroth, consequently necessitating more labor.

Rev. M. Mahin (Ind.)—I began bee-keeping with frames hanging crosswise, but I did not like them. The bees fill the combs more evenly when the entrance is at the end of the frames.

N. E. France (Wis.)—The hive I like best for extracting holds 10 brood-frames, with 16 same size (Langstroth size) crosswise the brood-chamber. Easier to handle, and two sets of extracting.

Mrs. J. M. Null (Mo.)—None in winter. In the working season all parts of the brood-nest could not be reached by the workers as readily. In *hot* weather it would hinder perfect ventilation.

Dr. J. P. H. Brown (Ga.)—I have used hives with frames both ways, and I could never see any difference in the work of the bees. In many things relating to the apiary theory and practice don't always work side by side.

C. H. Dibbern (Ill.)—As I tip my hives forward to shed water, such an arrangement would throw the combs out of perpendicular, and if foundation were used, or a swarm hived on starters, it would make a nice mess. Hives with gable roofs would do better, but it seems handier to have frames run from front to rear.

Eugene Secor (Iowa)—Too short to make good breeding combs. Too short for out-door wintering. Too many frames to handle. Supers would have to be made on a different plan without any improvement on the ones now in use.

Jas. A. Stone (Ill.)—It would not do at all, as the hive needs to have the entrance lowest to let the moisture run out, and that would cause cross frames to hang against the hive at the bottom and away from it at the higher end.

Dr. C. C. Miller (Ill.)—It's not the fashion in this country, and I like to be fashionable. It gives the bees less chance to ventilate the hive. It would necessitate leveling the hive from front to rear, which would not be so convenient.

E. E. Hasty (Ohio)—Mainly that it makes the frame too small. Also, because the hive doesn't want to be level from front to rear. Don't seem to be any objections but what could be got out of the way if large advantages were in sight.

C. Davenport (Minn.)—A good many. I want the back of the hive 2 inches or so higher, so that rain will not beat or run in at the entrance. With frames crosswise, the hive would have to be level lengthwise, and unless the hive was square it would take more frames crosswise.

C. P. Dadant (Ill.)—None whatever. The Europeans have discussed at great length this method, which they call the "warm frame" principle, as against the "cold frame," hung at right angles with the entrance. I never could see any difference in results. I have tried them both.

Wm. Rohrig (Ariz.)—If the number and size of the frames were the same in either case, I can see no objection, only that the hive must be level from front to back; and unless the hive is square it would take up more room in the row, which, with us, would be a decided objection.

E. S. Lovesy (Utah)—While I prefer to have the frames run from back to front, I have seen a great many colonies of bees do well with the frames running crosswise of the hive. I have noticed that, as a rule, the wax-moth is worse in hives where the frames run crosswise, than they are in hives where the frames run from back to front.

Adrian Getaz (Tenn.)—They do not admit of leaning the hive slightly forward. However, that is a very unimportant objection. They are warmer than the frames hung lengthwise when wintering out-of-doors. Frames hung crosswise stop the cold wind entering by the entrance, while those hung lengthwise let it run in freely between the frames clear to the rear wall of the hive.

P. H. Elwood (N. Y.)—I can not think of any serious objections, but would expect it to work not quite so well unless, as in our case, the entrance is at the center of the bottom. Any arrangement of frames and entrances that brings the honey uneven in the clamp. The same may be said as to the brood-department, unless the frames are long and shallow, when winter stores would be better at one end.

R. C. Aikin (Colo.)—Practically none. I have used extensively such in the past; they are better for nearly every purpose than the long Langstroth frame. They cost a little more, but that is a very small item. First cost is a trifle if it gets better results later. Without a detailed argument, let me say that I *know* short frames are all right for results in breeding, and the super arrangements can easily be adapted.

J. A. Green (Colo.)—The hive would need to be leveled front to rear, which, unless a portico or slanting bottom-board were used, would permit rain to drive in, which would not readily run out again. Hives can be leveled more easily in one direction than in two, which would be a practical necessity with the hives now in use, except by making the entrance at the side of the hive, which would often be inconvenient, especially in the arrangement of a large apiary.

E. Whitcomb (Nebr.)—None whatever. The same results would be attained, but it would give you rather an ill-shaped frame, especially if you were working for extracted honey. Of course, there would be more frames to fill the space, more wiring, more handling, and less ground to be gone over in a given time. In this day and age the fellow who is going to make two blades of grass grow where there has only been one, must be about it, or some fellow will have the grass plowed up and corn planted thereon.

G. W. Demaree (Ky.)—There are two objections to the plan of hanging frames crosswise in the hive: 1. I want my hives adjusted on the summer stands so as to be a little lower in front than at the back, so as to drain the hive of any water that may drift into the entrance of the hive, and this would hinder the frames from hanging true with the hive. 2. Such a plan would add to the number of frames, and this would add to the labor of handling the frames. As I look at things, the proper position of the frames is with their ends toward the entrance to the hive.

L. Stachelhausen (Tex.)—This question has two meanings. First, shall the frames hang crosswise to the hive-entrance or parallel to it? In this sense, there is not much difference in our climate; further north a crosswise position to the entrance, as it is generally used, is preferable. Why?—the sages there may answer. Second, if we have a 10-frame hive is it better to hang 10 frames in it the long way, or 12 shorter frames crosswise? The long frames are more favorable to brood development, and are better for wintering, because they contain more honey; 10 larger frames cost less than 12 smaller ones, and need less manipulation. I do not know any advantage of the crosswise frames.

Contributed Articles

Our National Association and Advertising Honey.

BY C. P. DADANT.

I HAVE noticed that editorial concerning advertising honey, on page 339, and also that of Editor Hutchinson in his May Review. I think both suggestions are timely and well taken. America is the most practical country in the world, and knows better how to advertise than any other country This is certainly why our goods scatter over the entire world. The Europeans do not know how to advertise, and their magazines do not get the support that ours do, because the only thing on which they can count with any show of profit is the subscription list. When they do advertise they do not seem to do it with so much force as we do here. "He pays the freight" has no actual parallel across the Ocean, although some houses manage to do a great deal of wall advertising, which calls the attention to them. I remember seeing an example of that, in Paris where the house that was "Not at the corner of the quay" made itself known to everybody.

These things being so, how is it that we neglect our interests in some very important advertising? Those who have read my trip to the Paris Exposition will remember that I was very much disappointed at not seeing a single exhibit of United States honey anywhere, while our manufacturers of bee-supplies (our own firm included) had very fine exhibits of their wares. Most to be regretted was the comparison that could establish itself in the minds of the European bee-keepers when they saw the Canadian exhibit of honey, made under the auspices of their association, which was splendid, and attracted a great deal of attention, while our own country was nowhere to be seen as a honey-producer. This failure ought not to occur again in any World's Fair, no matter where it is. We need to call the world's attention to our products, for we are the most extensive producers in all lines.

The same remarks apply to our own home exhibits. Not only ought each State to make an exhibit, but it seems to me of great importance for our National Association to make a colossal show, something to be remembered by all who see it. We have as efficient a General Manager as can be found. Mr. France has already shown that he is entirely devoted to our interests. All that needs to be done is to furnish him sufficient funds to push the advertising of honey, and I have no doubt that our large producers will see that he is furnished a large quantity of the very best and finest honey for the exhibit. Of course, it will be nothing but right to have each producer's name on the honey he sends. For this, money is needed, and I propose that we start a subscription list to defray the expenses of a National exhibit, and will myself subscribe $25.00 for this purpose, if this move is adopted by our producers.

Not only must we show our honey in a manner to impress the public, but I believe, as our friends, Editors York and Hutchinson, suggest, that we should advertise our product at large. I would suggest, also, that if our General Manager is supplied with sufficient funds, he could advertise our Association as willing to examine and test any samples of honey sent, and report to the persons interested.

There is not a single one of our producers of honey on a large scale but knows how unpleasant it is to have a stranger doubt the purity of our goods, whether comb or extracted honey. If each of our members was authorized to say to a doubting purchaser that he may send a sample of the product to the General Manager of the National Association, and that an opinion will be given free of charge, in return, concerning the purity of the honey sent, there would be a big point gained. I do not believe that this would add very much to the labors of the General Manager, because I think that very few persons would avail themselves of this opportunity, but it would give great strength to our producers, and would undoubtedly enable them to sell honey where they might otherwise have failed. I have no hesitancy in asserting that, were it not for the fear of adulteration, twice the quantity of honey would be consumed in America that is used today.

These thoughts are jotted down rather in a hurry, for this is a busy time with us at this date (June 4), but I hope this will serve to draw the attention of our larger producers. If we take a united action, there is no doubt that we can do ourselves much good. We are exactly in the position of a large manufacturer who does not advertise because he thinks his goods will speak for themselves. It is neither practical nor wise. Hancock Co., Ill.

LATER.—June 18. Since writing the above, I have laid my plan before the General Manager, Mr. France, and he approves it, although he says it is rather late for an exhibit at St. Louis. But most of the honey is harvested after this date, and I have never seen much of an exhibit of honey at any Fair before fall. Besides, the greatest crowds will probably attend the St. Louis Fair during our beautiful fall weather in September and October, and I have no doubt the management will gladly grant our National Association room to make a creditable exhibit. An appeal to our members by all our bee-papers ought to bring a good response in the way of honey, especially if it is understood that the producer's name will appear on his honey.

I believe, also, that a very great advantage can be derived from authorizing our members to refer their customers to the Manager of our Association in case they doubt the purity of their goods. It will be readily understood by the public that our Association is organized for the purpose of protecting *bona-fide* bee-keepers against fraudulent dealers in bogus honey, and an official representative of the organization will be able to give an authoritative opinion concerning any samples submitted to him.

We are just beginning to realize the great advantages that the union of forces can give our members. Let us work at perfecting our organization without delay. There is plenty of room for improvement.

I invite expression of opinions from one and all on this matter. If any one sees faults in the proposed moves, let him speak out. But let us keep united, and work, and we will succeed. C. P. D.

[See editorial on this subject. on page 467.—EDITOR.]

Law Governing Bees and Bee-Keepers.

BY HENRY KLEIN, LL. B.

MANY of the readers of this journal are no doubt interested in knowing the law that governs the bee-industry, and it is to acquaint them with the law on this subject that this article is written.

Bees are considered in law as wild animals, or, as it is commonly termed in legal literature, they are *feræ naturæ;* but when they are hived and reclaimed, a person may have a qualified ownership in them. The finder of a bee-tree who removes the bees to his own land, may thus become their owner. An unreclaimed swarm belongs to the person who first hives them; if a swarm fly from the hive of one person they continue his as long as he can keep track of and pursue them; but if they settle on a tree on his neighbor's land, he has no right to enter the land without permission.

If a person finds bees on the land of another, he does not thereby acquire any right to them. The bees belong to the owner of the land where the tree stands. To reclaim bees the finder has to remove them from the place where he finds them to his own land; thus if the finder of a bee-tree marks the initials of his name on the tree, he is not thereby reclaiming them, and he does not own them; any person finding the bee-tree after that, has the right to cut the tree and take the bees.

If a person gets a license from the owner of a bee-tree to cut the tree and take the bees, he acquires no property in the bees until after he has possession, and he has no rights as against a person subsequently obtaining a license and taking possession. The latter has the right to cut the tree and take the bees. If, however, the person obtaining the first license is cutting the tree, and the one with the second license interferes, the former may maintain an action against him.

From the principles laid down above it may be deduced that if a person should place a box in a tree for bees to hive in, the tree being located on another's land, he acquires no rights, and a third person may as to him take the bees and the honey.

Another phase of the subject may be of interest. Bees, while in a wild state, are not the subject of larceny; that is, no one can be punished for stealing them; but as long as they remain in the tree where hived, even though the tree belong to an individual and he has confined them in the tree, they are the subject of larceny.

An owner of bees is not usually liable for any injury they may do to third persons or to property; thus, where an action was brought against an owner for injuries done by his bees to horses passing on the highway near the place where the bees were kept, and it was shown that the bees had been kept there for several years without injuring any one, the owner was held not liable. Ulster Co., N. Y.

Convention Proceedings

Report of the Convention of the New York State Bee-Keepers' Association.

REPORTED BY MORLEY PETTIT.

(Continued from page 455)

R. F. Holtermann, of Canada, read the following paper on

MARKETING HONEY.

A good article for sale is more than half the battle in marketing. An article spoiled in production can with difficulty only get a market, and which it can never hold.

Better to know how to get an article in proper shape for market than only to know what to do to bring it before the attention of the buyer—both, however, are of great importance.

Honey must be in the right shape, and then distributed in the right way. To give to the people in each market what they want, sounds well to the unthinking individual, but to carry this policy out means to stop all so-called world's progress. Better methods are desirable, and any way of marketing which can be shown to be to the advantage of the trade and the consumer should be brought forward, and the public educated to see the advantage.

At present, honey generally is produced in about as unsystematic a way, and with about as poor results, as butter was 20 or more years ago. Here a few pounds, and there a few pounds, without uniformity in production or handling, and much of it injured; for in its various stages of production and handling its quality can be affected as much as butter. Too much of it leaves the hive when it is really not yet honey, but when it is still in its stages between nectar and honey. Again, that grand quality in desirable table honey—aroma—which helps to hold and develop our market, is practically lost sight of by our bee-keepers; their method of handling and the lack of speaking of it proves this.

I have 400 colonies of bees, and out of one county alone last season took some 30,000 pounds of honey, yet with all our rush we extract, and before the honey has lost the warmth of the hive we strain out any particles of wax and the like, and then immediately store the honey in vessels which can be tightly sealed as soon as filled. If any one asks, "What about the froth?" let me answer that froth on well-ripened honey is only to honey what the beaten white is to the white of the egg. They are the same, and produced in principle in the same way.

Next, honey contains formic acid. This is a valuable medicine, and retards, and even destroys, the growth of unwholesome germs. In storing, this should be considered. Honey can never remain long in contact with tin without this acid acting on the metal. The percentage of formic acid varies; I have had samples of honey analyzed, finding 100 percent more in some samples than in others.

Inferior goods not only hinder the sale of similar goods, but they injure the demand for a good article; one becomes the opponent to the other, one neutralizes the effect of the other, and of this phase of the market we can say, "A house divided against itself can not stand." As far as I know, all, or almost all, of our northern honey has the peculiar characteristic of becoming solid, crystallizing, or, as it is commonly called, granulating.

The more delicately flavored honey, such as clover, even in expert hands, rarely goes through the process of liquefying without perceptible deterioration in its delicate flavor and aroma. This may be disputed by those of less sensitive palate, yet remains true, and will stand the test. None of us, however, are likely to deny that when the average retailer, with little or no experience in this direction, undertakes to liquefy honey, evil results are almost a foregone conclusion. It may be fairly good, but too often the "bloom" has departed.

That the change which honey undergoes by overheating is important the polariscope proves. Long-heated honey not granulating tends also to show that the nature is changed; its color, flavor, and aroma, as we know, may also be lost.

Perfectly grained honey is also a safeguard against adulteration. Under the circumstances, a system of marketing extracted honey which would overcome the necessity of passing honey through the dangerous stage of liquefying would be an advantage.

In the production of honey we should guard against mixing in extracting, of inferior and better grades of honey. In almost every case it results in a reduced total return of dollars. Second-class honey should be kept and sold separately.

To produce and sell honey intelligently we must understand its nature. Honey is more than a sweet. Sole-leather and beef-steak, without our present knowledge of chemistry, are alike, yet it would be a difficult matter to convince even a hungry man of this. Within the last two years Prof. Shutt, of the Dominion Experimental Farm, Ottawa, Canada, has discovered that the past methods of analyzing honey are faulty, and we may reasonably hope that the stage of perfection has not yet been reached. Honey has, in addition to water, saccharine matter and formic acid, a volatile oil distilled by the blossom which secretes the nectar. The power of these essential oils can be best understood when we remember that in Eastern countries certain plants yield an oil which, consumed, produces death. It is this oil, volatile in its nature, which gives honey its aroma. We detect this agency in the blossom, in the field, when we lean over the hive in manipulation, again as we extract, and, last but not least, we know the delicious and often delicate flavor possessed by honey fresh from the hive.

It is desirable to retain as much as we can of this for table use. Assuredly, why should we follow blindly the lead of those who have gone before, and expose our extracted honey to the atmosphere, thus losing what, in my estimation, is so desirable to deliver to the consumer? There is so much to learn about the ripening process nectar undergoes in the hive. I see questions which, for their solution, require the careful expert and original thought of the bee-keeper and the chemist, the solution of which questions will be of practical and lasting benefits to the bee-keeper and consumer of honey.

The bee-keeper gets only a small percentage of the nectar the bees gather. The brood is fed, the heat and energy of the bee has, through food, to be provided for; the brood has to be warmed, and the process of ripening through raised temperature and the fanning of atmosphere in and out, all has to be done at the expense of food consumed. We masticate food and change starch to sugar. By the addition of certain secretions in this, the food undergoes the first stages towards digestion. The bees by nature are compelled to gather nectar a little at a time; they again transmit it to fresh bees at the threshhold of the comb; again, as it is moved about from cell to cell in the process of ripening, in all these, as in the slow process of mastication, the honey is being inverted, and in honey we have a partially digested, or predigested, food ready for assimilation. No other sweet on earth can boast of this in its favor.

The above processes, properly carried out, are done at a great loss in quantity from what is first gathered, but it is the machinery power, the coal, if you will, to produce the energy required to gather, change and seal this food in its stages from nectar to our valuable food—honey. At no stage should this process of ripening, etc., in the hive be stopped by the bee-keeper; to do so must work injury to our market.

Again, if we do not know wherein our goods are superior to others, which at first glance appear to be the same, and are *not cheaper*, but a less price, how can we expect to sell them to advantage, and do them justice? There is simply no answer to the question. We must understand their powers of merit, and have faith in them. Possessed with that conviction we can hope to convince *others*.

Think of a butcher, a dry-goods drummer, the hardware man, acting in that capacity for a horse-dealer, the dairyman pointing out the merits of fruit, or the poultryman sent as an expert to find a market for cheese and butter, and you have a spectacle of what every Dick, Tom and Harry is expected to do for honey. Even our governments are guilty of such actions. It is often done unthinkingly, but the consequences are disastrous to our honey market. Bee-keepers should combine in every large city, such as the one we are meeting in (Syracuse), and have a wholesale and retail establishment for the sale of honey. The retail establishment could have for sale articles of food, etc., in which honey has been used as an ingredient. Here the highest in the land could be drawn by advertising, exhibitions of bees, their handling at certain times, observatory hives and displays, setting forth the natural history of the bee, and so on. Such a store, at a comparatively small outlay of cost, could be made the talk of the city, and reach the most intelligent and desirable class of citizens, and honey be made to reach the tables of thousands upon thousands where the article is to-day a stranger.

In other places arrangements could be made to make the sale of honey a strong (not neglected) department of a business already established, or the business in certain places might only be run for a portion of the year, but always have in charge a bright, alert expert having confidence in and knowing the goods. These centers could also be made centers of instruction to employes in establishments where the sale of honey would be desirable.

Give a proper margin to the one who sells your honey. Bee-keepers as a body are much to blame for having their wholesale and retail prices too close together. A retailer should have not less than a margin of 20 percent.

We, as bee-keepers, often talk as if the price was our main difficulty in selling, and as if the price altogether stood in the way of a larger market. I venture strongly to assert this is not where more than half our trouble lies. We could raise the price if we only would first improve the general quality. Make stronger efforts to put the merits of honey before the public, distribute it more evenly over the country, and give the dealer a better margin. Does any one doubt it? Let him or her look at proprietary goods, trade-marked goods, which stare us in the face on every table to-day. Let him consider how much of their place on the market is due to real merit, and how much to advertising. Draw your own conclusion and doubt no longer.

Until millions and millions of dollars worth of sugar at present consumed by our people have been replaced by millions of pounds of honey, we have no right to say there is no market for honey. Give honey back the place it once had as a sweetener, and our people will have back a greater measure of health. The public must, of course, be provided with what it wants, but our keynote should be to educate them to use what they need, and what is best for them. It is in our interest, and the interest of the people, to advocate for the table either comb honey or honey that has been sealed until granulated. For a fancy trade we might put it into jars like cream cheese, and immediately run over the top a thin film of melted paraffin, the object being to exclude the air and retain the aroma of the hive. When granulated solid, as in large barrels, the block can be cut like cheese with a wire, and retailed. I know of no better way of marketing, and you can in this way give a customer the best value for his money.

Unfortunately for us bee-keepers, governments do not do us justice. We can form hands with you over the line, which we as Canadians hope will not be effaced as long as man's government lasts, and we can feel with you that we have a grievance in common. Governments levy taxes upon the wealth obtained by bee-keeping, but unlike other branches of agriculture, in production and marketing. The past history is that in nearly every case, for political or other expediencies' sake, incompetent persons have been appointed in the rare instances where anything has been done. The government betrays trust in this, and we as bee-keepers are worse off than before. Results in experiments have been given out where the expert bee-keeper can see under the veil and gnash his teeth, that his profession should be thus belittled, and the poor novice swallowing in his verdancy all that comes from such a source, like the blind leading the blind is brought into the ditch.

If we want to make the best showing in marketing, we must have government aid, and have the aid other departments of agriculture are getting—aid which a branch of agriculture having power to produce wealth merits, and not have our governments, by their lack of action, and even inaction, blazen it abroad that bee-keeping is not worthy of, or a rewarder of, the highest agricultural intelligence and application.

But this brings me to my closing remarks.

Bee-keeping is a business; it requires experience, application, and intelligent care to succeed in it. The sooner we impress this upon the bee-keeper, or prospective bee-keeper, the better for our honey markets.

My remarks have been lengthy, perhaps, rather than weighty. I have given you my best upon the subject. You have asked me to speak upon the subject, your quarrel must then be not with me, but yourselves. Doubtless the discussion will bring out something you have as bee-keepers in this State—the material and characteristics of people who can meet to advantage. You have large personal experience, often handed down from generation to generation. You are willing to impart information, and yet you realize all is not known, and new thoughts advocated will be duly weighed and valued. You have also in my visits shown that grand characteristic, courage to combat ideas which in your estimation are wrong, and a willingness to give credit where right, regardless of personal feelings. I wish you every success. R. F. Holtermann.

Mr. France—Be sure your honey-barrels are clean. Put them in the attic a year ahead and drive the hoops often. In the alfalfa districts a great many use tins for storage. The black from the iron darkens the honey. Never wash an extractor till you want to use it. Leave it coated with honey. Tin is better than galvanized iron.

A sample glass of syrup was shown, labeled "White Clover Honey Compound—25 percent Honey and 75 percent Corn Syrup."

Mr. Stewart—Why does not the manufacturer call it *syrup* compound?

Mr. Betsinger—It is being sold as honey.

Mr. France—The New York law is the best of its kind we have. Keep after these compound fellows. Make it unpopular.

Mr. Cass, who is a dealer in honey, said that the convention last year did a lot of good among the dealers, by calling attention to this stuff.

Mr. West—We largely knocked out this business. It was brought up in the grocers' associations. The penalty is the regular penalty of the agricultural law.

MR. HERSHISER ON "CROP REPORTS."

1. We could get them best through the General Manager of the National Association, because the honey of one State alone has not much influence on the markets of the country. All should join the county associations, and by this means the National.

2. What is an average crop in the various parts of the country? This is a subject for study, and will take several years to ascertain. Good crop reports are given in Gleanings every year. We should be willing to pay for crop reports.

3. There should be four reports in the year. 1st, from Cuba; 2d, from Texas and California; 3d, from all white honey sections about the middle of August; and 4th, from late honey. O. L. Hershiser.

Mr. Hutchinson—Foul brood inspectors would not get fair reports because their work is among diseased apiaries, and they have no time to visit others.

Mr. Hershiser—The General Manager should do this work and receive a salary in accordance with his duties.

Mr. France—This would be very expensive. A single report would cost $75 to $80.

Mr. Hershiser—Let those who get a full crop report pay 25 cents or so for it. It is worth it.

Mr. Betsinger—A National report would be a farce—too slow.

Mr. Hershiser was appointed to take charge of the New York State honey exhibit at the St. Louis Exposition this year.

The various foul brood inspectors reported on their work.

Mr. France reported that an association had been formed to be known as the North American Foul Brood Inspectors' Association. It is to meet in Buffalo next June, and hold a school on bee-diseases, at which lectures will be given by some eminent bacteriologist.

COPIES OF RESOLUTIONS.

Resolutions of thanks were passed to those who had taken part in the program, and to those who had come from a distance. Also the following:

Whereas, We believe the exhibition of the working apiary, in connection with exhibits of the products of apiculture at our last New York State Fair, was beneficial, and of great value in instructing and educating the public in the methods of securing pure honey; therefore, be it

Resolved, That it is the sense of the New York State Bee-Keepers' Association, in convention assembled at Syracuse, Jan. 15, 1904, that the exhibition of such a working apiary at the annual State Fair be continued; and we hereby ask the New York State Fair Committee to make proper and adequate provisions for such exhibition at the next and following State Fairs; and

Resolved, That the secretary of this Association be and is hereby directed to forward a copy of these resolutions to the secretary of the State Fair Committee.

Whereas, The Secretary of Agriculture, in his last report to the President, strongly urged the transformation and development of the Division of Entomology of the United States Department of Agriculture into a bureau; and

Whereas, It is the sense of the bee-keepers, of whom there are over 700,000 in the United States, that the apicultural industry does not and never has received recognition from the general government; therefore,

Resolved, That the New York State Association of Bee-Keepers' Societies in convention assembled, most heartily approve of the recommendation of the Secretary of Agriculture, that the Division of Entomology be transformed into a bureau, and that we repsectfully, but earnestly, request the representatives of the State of New York in Congress to support and use ther best endeavors to secure the desired change.

Resolved, That the secretary of this Association be and hereby is directed to forward copies of these resolutions to the Representatives of the State of New York in Congress, and to the Chairman of the Committee on Agriculture of the State and House.

H. S. Ferry,
Orel Hershiser,
Geo. B. Howe.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

German Honey-Cakes.

Eight cupfuls sugar; two cupfuls honey; four cupfuls milk; one pound English walnuts; three cents' worth each of candied lemon and orange peel; five cents' worth citron cut fine; two large tablespoonfuls soda; two teaspoonfuls ground cloves; two teaspoonfuls ground cinnamon. Put the milk, sugar and honey on the stove to boil 15 minutes, skim off the scum and remove from the stove. Put in the nuts, spices and candied fruits. Stir in as much flour as can be done with a spoon. Set away to cool, then mix in the soda. Cover and let stand over night, or a few days if possible. Then stir in enough flour to make a stiff dough; roll out little thicker than for ordinary cookies, and cut in fancy shapes. Will keep for months; in fact, they are not good until they have been made a few weeks, at least.—Mabel Peele, in Rural New Yorker.

Getting Bees Out of a High Tree.

I can tell the sisters a better way than the brethren. Carbolic acid. It won't hurt the bees, but will make them let go, and get out in a hurry. I had a swarm come out last week, that was very high-minded. It settled in the top of a high cedar on the front. I had a 12-foot strip, and one 10 feet long, and I nailed the two together and put a good-sized piece of rag with saltpeter on it and put on the pole and set fire to it. It was hard work to raise that long pole, but I got it up and poked it in among them. They swarmed out around the top of the tree, and I did not see anything of them, so I thought they had left for the woods. After a while I heard them, and went inside of the trees, and they were settling on a limb a little further along, and not quite so high, but in as bad a place, so I got the pole on the outside on the road.

I had just made a lot of saltpeter rags, and had put on a piece of a child's little dress, took some fine wire and tied it to the end of the pole, struck a match and held it to the bottom and let them down. One of the neighbors came along, and he raised the pole for me. I told him to poke it right under them. By this time there was a pretty good smoke, and pretty soon he said they had let loose. We came inside of the trees and were looking, and he said they were around a certain hive, and I could get them there. I went to it and I found they were going in as fast as they could, and they are still in there, or at least I have not seen them come out, and have watched in the middle of the day, and am writing now where I can see the yard plainly. As they have not come out I have been thinking whether or not the queen was missing in it all. Do you suppose such is the case? They seem to be working all right.

I have had 5 swarms, 3 in May and one besides the above in June. I had one come out and partly settle and then go back, and in two days come out again and settle with another one that had come out. They were so large I could not get them all into one hive, so I put another hive-body on top of it and they all went in; both seem to be full of bees. They have been doing well, and are now working strong in the supers. I will have to put on extra supers on several of others, but it has been so cold almost all of June that I have not done it yet, but it is getting warmer, and I hope it will stay warmer; it has been worse than it was last spring.

I did not get the bees cleaned up until May, and I only lost one colony, which starved. I had plenty of honey, but being so lame, and having so much to do, one did not get attended to the same day, and it got cold so I could not attend to them, and did not get it done at all; the spring kept so cold I could not do it. I sawed off the ends at the top and laid a full frame in under the cushion; they ate all that and were dead when I could see to them.

All the colonies came out strong with lots of brood, where I could attend to them, and the weather was warm enough to be safe to open the hives. I gave them clean bottom-boards and a clean hive, and cleaned off the tops of the bars, so they have no carrying out of rubbish, only just to go to work with a clean house.

I was very thankful that I got so I could walk without a cane before I had to hive any bees, else I do not know how I could have done it. I have done everything out-of-doors for a year with a cane in one hand and a basket in the other, in which to gather all my truck—all last summer and fall; I tell you, it seems good to go around without it. Had I not gotten the rheumatism and neuralgia so badly in the winter, my eye would have been well now, but that threw it back a month. It is gaining now, and I hope it will soon be entirely well. If any of the sisters, or brethren, have, or should have, rheumatism, I would recommend them to be sure to write to Prof. Malcom Watson, Battle Creek, Mich., who will send them a week's trial treatment. I have not found any thing that is equal to it. Any ordinary case will be entirely cured in 30 days, but I have had it so long it will take another 30 days, but it has done me a lot of good. I have spent enough to cure me, in liniments and oils, and to no permanent good. This is not about bees, but I pity any one so much that has rheumatism that I want to tell him how to get cured. Our good editor might get it, and I certainly would want him to know how to get rid of it.

I get so much good from the other sisters, that I want to contribute my mite, if it will do any good. And I want to thank Dr. Miller for the saltpeter rags, not only for smoke but for bees up in a high tree.

Well, if I don't stop, I will go in the waste basket, if I don't already. MRS. SARAH J. GRIFFITH.
Cumberland Co., N. J., June 13.

If I understand you rightly, the swarm went into an empty hive; that being the case, the queen is probably all right, as the swarm would hardly have staid there without a queen, or any means of rearing one.

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we have used it ourselves.

PRICES, prepaid—Sample copy free; 10 for 20 cts.; 25 for 40 cts.; 50 for 70 cts.; 100 for $1.25; 250 for $2.25; 500 for $4.00; 1000 for $7.50. Your business card printed free at the bottom of the front page, on all orders for 100 or more copies. Send all orders to the Bee Journal office

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

DIRECTIONS FOR AN OBSERVATORY HIVE.

Even if you don't preserve all your American Bee Journals, preserve the one with diagrams and directions for making an observatory hive. Keep it till you make the hive. If every bee-keeper kept an observatory hive on view it would increase the market for honey quite a bit—every one that sees gets interested, and most of those that get interested want some honey. Allen Latham should have our thanks for the article and diagrams. Page 359.

CHICKENS AS DRONE-CATCHERS.

Mrs. Mary A. Ray, in the Sisters' department, touches on one of the semi-important minor matters when she gives her experience with chickens taught to catch drones at the hive-entrances. She finds they soon learn to take heavy-laden workers, also. The theory is, that a chick or duck might indeed break over for once, but would get a sting in the throat sufficient to cure it of such wrong-doing in the future. Doubtful theory. Like other doubtful theories, I guess it needs looking after. Quite a good few living creatures succeed in swallowing worker-bees without getting stung much. Sad if poultry get into the same company. Page 360.

HATCHING EGGS OVER BEES.

And who should score a little fragment of success in hatching eggs over bees but our good and enterprising brother, Allen Latham? With a week's effort just one egg showed a little touch of red. Well, that partly redeems the thing from the charge of whole-cloth mendacity. Page 362.

INDIVIDUAL HIVE-SHED—RELIQUEFYING BARREL HONEY.

We should scarce expect the man who runs a watchmaker's business, an apiary, and an 80-acre farm, too, to be the one to invent a diminutive shed for each hive—but so it is. Good thing, no doubt, for those who have few colonies, and are willing to take the trouble.

And this Missouri Yankee's method of reliquefying honey is to turn the barrel upside down! After having duly laughed at the plan we might as well get at the true inwardness of it. Yes, honey often candies, and then, after a while, reliquefies, or partly reliquefies itself (more frequently the latter). Turning the barrel over just as this natural process is beginning will help along nicely. Presuming that there is a space of half an inch or more under the upper head, all the mass peacemeal has to move that far—but such honey as they sell in paper bags is not going to get juicy by merely turning it t'other side up. I should suppose that when the barrel of honey reaches a partly fluid state, rolling it a little semi-occasionally will hurry matters up. To get honey fluid enough to run out a bunghole, and obviate the necessity of taking the head out, is worth something. A. G. Erickson, page 362.

LEATHER LOOPS FOR CARRYING TOOLS.

Leather loops on one end of the comb-carrier, in which the brush and tools can be thrust for carriage! That's an idea I have not met before. One advantage of it is that the loops are unobtrusive—you don't have to use them unless you want to. Page 364.

QUEEN-GUARD AND SWARMING OUT.

I don't think a queen-guard put on an entrance after hiving (with five queens inside) is going to be of any particular use one way or the other. You see, the bees don't know the queens can't follow—and once out in the air they won't come back to a hive they have recently been hived in as they would to the paternal (maternal?) roof. So I think that in C. G. Ascha's case, they would have staid all the same without the guard. Page 364.

PROPOLIZED CAMBRIC FOR BEE-GLOVES.

And what about S. T. Pettit's propolized cambric for bee-gloves? I feel a little suspicious about the plan. Fussy getting the material propolized. Liability to getting it torn full of holes. Should think it would be disagreeable to make up. Main question whether it would be voted too disagreeable to wear. Why not make the gloves first and then put them under the quilts to be propolized? Holes and bare spots better dealt with in the fabric perhaps. Page 366.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Swarming.

1. Do bees ever swarm before one sees drones flying?
2. Did you ever know bees to swarm and not cluster, and go for parts unknown, before 7 o'clock in the morning? MAINE.

ANSWERS.—1. No, unless it be a hunger-swarm.
2. No. Yet some have reported the departure of swarms without clustering. It is certainly not a common thing.

Starting a New Colony by Dividing.

I am a beginner, and have one colony that has its brood-chamber full. I put a 10-frame hive on top of their hive, and they are filling it very fast. I want to take that 10-frame hive and start another colony. How will I do it? ILLINOIS.

ANSWER.—Very likely the colony will settle the matter itself by sending out a swarm for you to hive in a 10-frame hive. If they do not swarm enough to suit you, you can divide them. I suppose the colony is in a box-hive with the 10-frame hive on top. The probability is that the queen will go up into that upper story with brood and eggs in it; lift off the upper story, move the lower story to a new stand, and set the upper story on the old stand. That may not be the best way, but it is about the easiest way for one of no experience. By all means get a book of instructions, and study it carefully.

Milkweed Pollen-Masses and Bees.

I herewith send you a few bees for examination. You will notice a substance on their feet, which they bring in from the field, and it seems that they pull off the little foot with it by detaching it, then they are brought out of the hive by the other bees. What is it? If this substance gets on any other live bee it stickes to it as you see it on these. You will also see where the little feet are torn off. The bees were brought to me by a friend about 10 miles distant, and he says it is destroying his bees. I have never seen anything like it here. KANSAS.

ANSWER.—Those bees have been working on milkweed, and the little masses attached to their feet are from the flowers, hindering them from climbing up in the hive, and then the other bees drive them out. Your friend is needlessly alarmed; no great harm will come to his colonies, and the trouble will soon be over.

Scale Lice and Maples.

We have something here that "gets me" in the way of honey-flow. Our maples are covered with cotton pods like the sample I send. They drop a syrup on the leaves and on painted tools under the trees so thick that one can touch them with the tongue and they taste very sweet. (A peddler came along the other day, and I had left my rubber boots under the tree, and they stuck to his hand, and I have not seen them since!)

Bees are doing fine; we have had no swarms yet. We do not run for swarms—we want honey. If this flow continues we will have a wonderful crop. It has lasted about 10 days now, and gets stronger every day. The long stick I send you is one that has just started. In about three days the sweet comes on them, and then the flow commences. I would like to know if this is the insect that makes honey-dew, or is it something new? IOWA.

ANSWER.—It "gets me" as well. I never saw anything of the kind before. The maple twigs are covered with the largest scale lice I ever saw, a fourth of an inch long, and proportionally larger in other directions. Under the shell of some of these there seems developed a white, cottony mass, perhaps four times the bulk of the original insect. The most remarkable thing about it is, that when one takes hold of one of these masses and draws it out, it stretches out into beautiful silky fibres. Holding it over a two-foot rule, I stretched one 15 inches before the last fibre broke. I wish some one would tell us more about it, and I hardly know whether it belongs in the domain of the botanist or entomologist.

Italian Bees For Sale.

1 colony in good frame hive	$5.00
1 strong 1-frame Nucleus	1.00
1 " 2-frame " (with tested queen)	2.50
1 Untested Queen	.75
1 Tested Queen	1.00

☞ My crop last season was about 40,000 pounds of honey (nearly half comb) from 210 colonies, spring count, and increased to 280 colonies, which shows my bees are hustlers.

N. STAININGER, TIPTON, IOWA.

The Emerson Binder.

This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only $1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.

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the Nickel Plate Road will run an excursion to Chautauqua Lake, N. Y., and return at one fare for the round-trip ($14.00) from Chicago, with return limit of August 30th, by depositing ticket. No excess fare charged on any train on Nickel Plate Road. Cheap rates to other Eastern points. Three daily trains, with vestibuled sleeping-cars. Individual Club Meals, ranging in price from 35c. to $1.00; also service a la carte, and Mid-day Luncheon 50c., in Nickel Plate dining-cars. Write John Y. Calahan, General Agent, 113 Adams St., Room 298, Chicago, for particulars. Chicago city ticket offices, 111 Adams St., and Auditorium Annex. 'Phones, Central 2057 and Harrison 2208. 14—27A4t

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FROM MANY FIELDS

Introducing Queens.

When you are ready to introduce a queen, get a cup of hot water, or as much as you want, and stir into it some honey or sugar, making it thick enough to stick to bees. When it is cool, take a spoon and sprinkle it between the frames on the bees, and on the queen in the cage; then open the cage and let the queen run in where you have sprinkled the most sweets, and the bees are as gentle and busy as can be. RUDOLPH BAHR.
Bighorn Co., Wyo., June 19.

"Shook Swarms"—Honey Without Bees—T Supers.

I sold 12 colonies, and lost one during the winter, and one queenless, and have 15 left. As I had a couple of dozen old combs, and some of them with honey in, I have wished for that number of swarms, and have had but one, so I took it into my head to make a couple of shook swarms. So I went at it, and to commence I smoked them, which was all right, then thumped on the hive, which has been recommended by some. They were lying out considerable, but the smoke drove them in, but when I thumped on the hive they resented it at once, and sallied out and were on the war-path. The result was I had to give it up, and I still have no "shook swarms." I have finally concluded not to believe all I read hereafter. I had gone through the hive a few weeks before and hunted out the queen and clipped her wings, and did not get a sting; but the thumping was the last straw.

It appears that some one gets wise occasionally and informs us how honey is made without bees, and when they have the comb built and filled they invariably have it sealed with a hot iron. The next one that

DEATH TO LICE.

LOSS BY LICE

on poultry amounts to many times the cost of **Lambert's Death to Lice**—the sure preventive. All loss can be saved and more profit made by the use of this famous powder. It frees setting hens from these pests without harming eggs or chicks. A trial box 10c will prove it. 100 oz., by express, $1.00. "Pocket Book Pointers" free

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Send us $1.00 and the name and address of one NEW reader for the American Bee Journal, and we will mail you one of the Queens free as a premium.

Now, go out among your bee-keeping neighbors and friends and invite them to subscribe for the old American Bee Journal. If you want some to show as samples, we will mail you, for the asking, as many copies of the American Bee Journal as you can use.

Should there be no other bee-keepers near you, and you desire one of these fine Queens any way, send us $1.50 and we will credit your subscription for one year and also mail you a Queen. Of course, it is understood that the amount sent will pay your subscription at least one year in advance of the present time. So, if your subscription is in arrears, be sure to send enough more than the $1.50 to pay all that is past due.

As the supply of these splendid Queens is limited, we prefer to use all of them as premiums for getting new subscribers. But if any one wishes to purchase them aside from the Bee Journal subscription, the prices are as follows: One Queen, 75c.; 3 Queens, $2.10; 6 Queens for $4.00.

We expect to be able to fill orders by return mail, or almost as promptly as that, so there will be no great delay at any rate

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We have often wondered **WHY** the old American Bee Journal does not **LEAD** in the number of regular subscribers instead of being second? It is **first** in age, and if we may believe many unsolicited testimonials, it stands first in value and helpfulness to its readers. Now, why not make it take the **first place** in the **number** of its regular readers? That's the question.

The next question is, How can it be done? Well, just like the bees of a colony store its surplus honey. One or two bees do not gather it all. Each working bee does a part. Thus, "many hands make light work"—and the job is soon done.

Now, suppose each present regular reader should say to himself, or to herself; "I'll get **one** new subscriber for the American Bee Journal in the month of July, and another one in August." One a month should not be a difficult matter. It may be that many can do better than that. Many have done so already. But suppose there should be gotten during July and August two new subscribers by each one who now reads the American Bee Journal, wouldn't that be a great thing? We believe it can be done.

You know the American Bee Journal, and can best tell to your bee-keeping friends and neighbors its real worth to any one who will read it carefully, and practice its teachings. We will send you all the free sample copies you can use wisely.

We offer valuable premiums for the work of getting **new** subscribers **at $1.00 each.** In addition to the Queens mentioned on this page, here are a few more premium offers:

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For 2 New Subscribers—Dr. Miller's Book—"Forty Years Among the Bees" (book alone, $1.00.)

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For 3 New Subscribers—Novelty Pocket Knife with your name and address on one side of handle, and Queen, Drone and Worker-Bee on other side (knife alone, $1.25.)

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Now, we hope that all who can possibly do so will see what they can do in the line of getting **NEW** subscribers for the American Bee Journal. You will likely surprise yourself at the way you will be able to get them. And it will also pay you well, as you will get the valuable premiums we offer to you. We would like to receive **at least two new yearly subscribers from each reader during July and August.** We will be glad to be kept busy at our desk during the hot weather. We never felt better than we do now, so can stand a grand rush of new subscribers. Just let them come!

Now, for a big pull, and a pull all together! How many will be first to send in new subscriptions?

Address all orders to, Yours fraternally,

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comes up, tell him to take a comb made and filled by the bees ready to seal, and try to seal it with a hot iron, and see how he comes out. It will melt the comb and fry the honey. One thousand dollars has been offered for one section made and filled and sealed over. You might offer $10,000 for one sealed in that way. That would forever silence that talk.

I notice some ask Dr. Miller where he gets his T supers, as they can't get any. I have failed to see any such as I use. They were originally gotten up by Elvin Armstrong, some 20 years ago, but he soon went out of the business, and I could never get any more until I sent a sample to a factory in Hudson, Wis. The next year a firm in Minneapolis bought them out, and when I sent for more they had lost their model and I sent another. Later I sent a model to Kretchmer Mfg. Co., and I suppose they have it yet, but I have not sent for any this year. There is one fault with them in the late design which the original did not have, and which I should call their attention to if I should order again. The originals had half a bee-space above and below the sections, so that when you come to tier up it leaves a whole bee-space between. The late ones have a whole bee-space above and below, and when tiered up it leaves a double bee-space between, which the bees will in most cases fill with honey. The same trouble occurs where there is a whole bee-space between the frames and the top of the hive.

I cut down some of the supers before I put them together. J. C. ARMSTRONG.
Marshall Co., Iowa, June 25.

Bees in Fine Shape.

The bees are in fine shape. They came through the winter all right.
R. R. PATTISON.
Otero Co., Colo., June 12.

Getting a Nice Start.

I have quite a start from 4 colonies, spring count, having increased to 13, and on June 3 I took off 13 nicely capped sections from my best colonies, and from this same hive I took 5 frames of brood. Last week I found in one hive 5 nice queens, and I do not know how many more there were. I caged 3 and introduced them into nuclei, and also took out 3 queen-cells. This is the first time I ever saw more than one queen in a hive, and they were big ones. R. L. MCCOLLEY.
Wood Co., Ohio, June 24.

Too Windy for the Bees.

The weather conditions are against the bees gathering honey, and have been up to this time, so much so that new swarms that came off had to be fed. There is lot of alsike and white clover, and plenty of nectar since spring set in, but the weather was so that the bees could not get out to get it. We have had to feed a lot since putting the colonies out. The losses around here by dwindling were heavy since puting them out.

I have just visited the yard, and the bees are like a water-logged ship in a gale—can not keep their bearings. I wonder if it is not blowing the feathers off the chickens out West, where J. P. Blunk holds the fort, as I see feathers flying in the air. You people of Chicago that have a weather bureau, don't forget Iowa; give it a little milder, please.
W. IRVINE, SR.
Webster Co., Iowa, June 25.

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One fare for the round-trip, plus 25 cents, July 2d, 3d and 4th, within 200 miles from the starting point on Nickel Plate Road. Return limit July 5th. Chicago Depot: LaSalle and VanBuren Sts. City Ticket Offices, 111 Adams St., Auditorium Annex. Telephones, Central 2057, and Harrison 2208.
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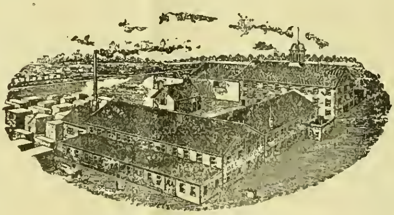

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Beedom Boiled Down

As Busy as a Bee.

It's time for getting busy; jes' as busy as a bee.
I tell you that's the animal as most appeals to me.
A singin' in the clover and a ramblin' in the sun,
A-racin' with the butterflies, nor carin' who has won.
Gatherin' up the honey that is waitin' everywhere;
Findin' everything you want to eat, an' some to spare.
Livin' fur the present, with its comfort an' its glee—
It's time fur gettin' busy; jes' as busy as a bee.
—Washington Star.

Does Bee-Keeping Pay?

Perhaps no other question is more often asked, in regard to apiculture than, "Does bee-keeping pay?" A harder question would be difficult to imagine. Does store-keeping pay? Yes, and no. Under the same conditions either is profitable to certain persons. Under the same conditions neither is profitable to others. Some succeed where others fail. Some fail where others would have succeeded. It's so the world over, in all branches of industry and commerce.—American Bee-Keeper.

Washing Honey from the Cappings—Honey-Vinegar.

Up to a short time ago I used to wash the cappings and then squeeze them into balls, after which I placed them in the kettle for rendering. A month or two ago I adopted a different method which I consider an improvement, and, as it may be of interest to some of the readers, I will describe it. In the first place I leave the cappings in the uncapping can for several days, sometimes for a week or two, and occasionally take the honey-knife and cut down through them, and stir them about so as to liberate as much of the honey as possible. When ready to render the wax, I take a tub and put in it rain-water equal to about two-thirds of the amount of cappings I intend to wash in it (by measure). I find that after the cappings have been well drained there still remains in them enough honey to make good, strong vinegar by using the above proportions of water and cappings.

The water should be of a temperature so as to feel slightly warm to the hand. I have not tested the temperature, but think it should be little if any above 100 degrees, Fahr. If too warm it will soften the cappings, and this we do not want. They should remain somewhat brittle. If too cold it will not readily free the honey from the cappings.

When the water is ready the cappings are thrown into it, thoroughly washed and stirred about, and well broken up with the hands. After the cappings are thoroughly washed, instead of pressing them into balls as I used to do I throw them back into the uncapping can to drain, and allow them to remain as loose as possible. After they are well drained they are put in the pan or kettle for rendering.

The advantage that I claim for this method over the one of squeezing them into balls is: First, the water drains from the cappings much sooner, and, second, in this loose form they are more readily attacked by the heat, and will therefore melt in a shorter time. Any one who has never tried this method, I think will find it an improvement.

As I have described my method so far, I may as well tell what I do with the water used for washing the cappings. As this sweetened water will make excellent vinegar, it would certainly be a great waste to throw it away. I therefore put it in a barrel or keg having the head removed, and also add to it the water that is used for washing or rinsing the extractor and other utensils that have become

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What They Say.

W. H. PUTNAM, River Falls, Wis.

Dear Sir:—I delayed answering your letter until I had read the June number of the RURAL BEE-KEEPER, and must say as a bee-keeper of 22 years' experience, I am more than pleased with it, regardless of the assertions of some that the publishing in this line was already overdone; and if the improvements continue it will certainly be second to none within its first year of publication. I consider the June number alone worth several years' subscription to any practical, live bee-keeper, and I will say, let the good work go on and on. You have a good field, and the fact of our having a bee-journal published in our own State, should be a lasting stimulant to all bee-keepers of Wisconsin and the Northwest, and 50c certainly cannot be invested to better advantage. You may send me some more blanks.

Hillsboro, Wis. Yours truly, ELIAS FOX.

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DITTMER'S FOUNDATION
RETAIL AND WHOLESALE.

Has an established reputation, because made by a process that produces the **Cleanest and Purest, Richest in Color and Odor, Most Transparent and Toughest**—in fact, the best and most beautiful Foundation made. If you have never seen it, don't fail to send for samples. Working wax into Foundation for Cash a specialty. Beeswax always wanted at highest price. A full line of **SUPPLIES**, retail and wholesale. Catalog and prices with samples free on application.

E. Grainger & Co., Toronto, Ont., Sole Agents in Canada for Dittmer's Foundation.

GUS. DITTMER, Augusta, Wis.

Special Notice to Bee-Keepers

BOSTON

Money in Bees for you.
Catalog price on

ROOT'S SUPPLIES.

Catalog for the asking.

F. H. FARMER,
182 Friend St., Boston, Mass.
Up First Flight.

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For Sale.

50 or more colonies of **BROWN BEES** in Langstroth-Simplicity hives, made of dressed cypress and painted, with Langstroth frames—all standard size. Will take $3.00 per strong colony as they stand. Address for information,

JOHN KENNEDY, Selma, Miss.

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ITALIAN QUEENS,
BEES AND NUCLEI.

Choice home-bred and Select Imported Stock. All Queens reared in full colonies.

One Untested Queen.....$. 65
" Tested Queen....... .90
" Selected " 1.10
" Breeder " 1.65
" Comb Nucleus (no Queen)........... 1.00

All grades ready now. Safe arrival guaranteed.

For prices on quantities and description of each grade of Queens, send for free Price-List.

J. L. STRONG,
204 East Logan Street, CLARINDA, IOWA.

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WE SELL ROOT'S GOODS IN MICHIGAN
Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Beeswax Wanted for Cash.

M. H. HUNT & SON,
BELL BRANCH, WAYNE CO., MICH.

10 CENTS A YEAR.

The Dixie Home MAGAZINE, largest, brightest and finest ILLUSTRATED MAGAZINE in the world for 10c a year, to introduce it ONLY. It is bright and up-to-date. Tells all about Southern Home Life. It is full of fine engravings of grand scenery, buildings and famous people. Send at once. 10c a year, postpaid, anywhere in the U.S., Canada and Mexico. Six years, 50c. Or, clubs of 6 names, 50c; 12 for $1. Money back if not delighted. Stamps taken. Cut this out. Send to-day. **THE DIXIE HOME,**
24A48t No. 75, Birmingham, Alabama.

Please mention Bee Journal when writing.

ANOTHER

CAR=LOAD

of Hives, Sections, and Supplies of all kinds just arrived from G. B. Lewis' Factory, and are ready to fill orders quick. Send us your orders for everything. We have it.

Louis Hanssen's Sons
DAVENPORT, IOWA.

5A26t Please mention the Bee Journal.

daubed with honey. At times we also have small quantities of honey that are off color or for some reason not fit to offer for sale, and if not needed to feed the bees, this is used by mixing it with the proper proportion of clean water. All odds and ends of honey are used this way. The barrel is placed in an out-of-way position in the honey-house and a piece of cheese-cloth thrown over it and a board laid over this to keep it in place, or else the cloth is tied in place. We should aim to exclude flies and all insects and yet expose it to the air as much as possible.

If the water is warm, fermentation will set in in a few days, and in a week or two we will find a thick scum on the surface of the liquid. This I remove about every week or ten days, or as often as it accumulates to a considerable extent. Each time after removing the scum I take a dipper or cup and dip out a cupful and pour it back from a height of two or three feet. This I repeated some ten or twelve times. It also hastens fermentation if a quantity of mother from old vinegar is added. Some may claim that it is not necessary to remove the scum, as it will finally settle to the bottom of the barrel and do no harm, but I once made a lot and neglected to remove the scum and this was so bitter that it was not fit for use, and I see no use in having it in the vinegar when it can be so easily removed.

If the barrel or keg is removed to a warm room on the approach of cool or cold weather, the vinegar should be fit for use within six months after the time it was made. When it is finished it should be carefully dipped or poured into a clean receptacle, or what is better, draw it off with a hose, being careful not to disturb the sediment at the bottom of the barrel. When you have this you have an article that you know is pure and good, and do not have to go to your grocer and purchase so-called "pure cider vinegar" that is likely made of water and poisonous acids that are not fit to be taken into the stomach.—S. E. MILLER, in Progressive Bee-Keeper.

A Mistaken Doctor and Glucose.

Dr. Louis B. Allyn has an article in Good Housekeeping, in which he says one of the chief uses of glucose is for feeding bees. Now, it seems so to us that the Doctor has been wrongly informed. We think if he should start out to hunt a man who makes a practice of feeding glucose to bees that he would have to hunt some time before he would find him. Too many professional men are in the habit of making unreliable remarks about an industry of which they know but little except at second hand. Glucose gets mixed with pure extracted honey a great many times, no doubt, but the bees have nothing to do with the process. It is done principally by unscrupulous syrup manufacturers, so-called, after the honey leaves the hands of the bee-keeper, and doctors should know what they are talking about before they put such remarks in print on the pages of a popular and widely read magazine. Such statements do no one any good, and grossly misrepresent a growing and valuable industry.—Modern Farmer and Busy Bee.

Comb Honey—Early Marketing.

If the reader will look over our honey quotations for the last three months he will see that comb honey has been getting dull, duller, dullest. The fact is, bee-keepers, not heeding our injunctions, have been dilatory about getting their last year's crop on the market. A great deal of it has been shipped *since* the holidays, when it should *always* be on the market *before*. Last fall there was not enough good honey to supply the market. All this spring there has been a glut and falling prices.

Mr. Selser, one of the principal honey buyers in the East (and his statement is reinforced by the principal buyers of the country), urges the importance of shipping all Northern honey to market between Sept. 1 and Dec. 1. Clover and basswood should be sold as soon as taken off the hive. There is a time for a few days early in the season when the first new honey brings a fancy price. It is

Clubbing Offers Here is a *Sample.*

Modern Farmer	$0.50
Western Fruit Grower	0.50
Poultry Gazette	0.25
Gleanings in Bee-Culture	1.00
	$2.25

All one year only $1.00.
Write for those just as good.
Sample Free

NEW SUBSCRIBERS can have the AMERICAN BEE JOURNAL in place of GLEANINGS, if they wish, or all for $1.60. Renewals to American Bee Journal add 40c more. **MODERN FARMER,**
St. Joseph, Mo.

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The 20th Century Poultry Magazine.

15th year, 32 to 64 pages. Beautifully illustrated, up-to-date and helpful. Best known writers. Shows readers how to succeed with poultry. **50 CENTS PER YEAR.** Special introductory offers: 10 months 25 cents, including large practical poultry book free: 4 months' trial 10 cents. Stamps accepted. Sample copy free. **POULTRY SUCCESS CO.** Dept. 17,
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The Rural Californian

Tells all about Bees in California. The yields and Price of Honey; the Pasturage and Nectar-Producing Plants; the Bee-Ranches and how hey are conducted. In fact the entire field is ully covered by an expert bee-man. Besides his the paper also tells you all about California Agriculture and Horticulture. $1.00 per year; 6 months, 50 cents. Sample copies, 10 cents.

THE RURAL CALIFORNIAN,
218 North Main Street, - LOS ANGELES, CAL

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The American Poultry Journal

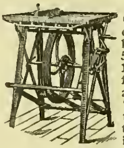
325 Dearborn Street, CHICAGO, ILL.

A Journal that is over a quarter of a century old and is still growing must possess intrinsic merit of its own, and its field must be a valuable one. Such is the

American Poultry Journal.

50 cents a Year. Mention the Bee Journal

BARNES' FOOT POWER MACHINERY



Read what J. I. PARENT, of Charlton, N. Y., says: "We cut with one of your Combined Machines, last winter 50 chaff hives with 7-in. cap, 100 honey racks, 500 brood, frames, 2,000 honey boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.

Address, W. F. & JOHN BARNES,
995 Ruby St., Rockford, Ill.

Please mention Bee Journal when writing.

8-Frame 1 1-2 STORY Hive for $1.

This hive is rabbetted at corners; is the best $1 hive made. No. 1 Sections, $4; No. 2, $3.50. Shipping-Cases, 12-lb., $8 per 100; 24-lb., $13; 20 lb. Danzy, $10; without glass, 50c less per 100. Dovetailed Hives, Foundation, Smokers, etc., **CHEAP.** Send for List.

W. D. Soper, R.D. 3. **Jackson, Mich.**

22Ctf Mention Bee Journal when writing.

Take Notice That the New Century Queen-Rearing Co. will have 1000 Queens ready for the mail by April 20. Tested, $1.00; Untested, 75c; 5 for $3.25; 10 for $6.00. Prices on larger quantities and Nuclei given on application. "Prompt service; fair treatment" is our motto.

Address,

John W. Pharr, Prop., Berclair, Tex.

13Atf Please mention the Bee Journal.

right here that the early bird—the bee-keeper—catches the worm.

Of course, just now is the dull or off season for comb honey; but it is duller than usual at this time of the year simply because producers were slow about getting their goods on the market. Then when they did ship, they shipped all at once and glutted the market. Many held back, thinking to get better prices; but in this they made a fearful mistake. There is a large amount of comb honey on the market now that came in too late to be sold. Some of it has been disposed of at a fearful sacrifice. We know personally of a number of commission men who have been roundly scored for selling at so low a price, when we know as a fact they did the very best they could with the market as it is.

Fancy honey sells almost any time at a fancy price; but this kind of honey is usually all disposed of before the holidays, before the second quality reaches the market, say in late winter or early spring, and then when poor prices are secured, if any at all, there is a kick, and the commission man has to take it fore and aft. We do not champion the honey salesmen, but bee-keepers need to be reasonable and fair. They need to wake up, as Mr. Selser says, and learn when is the best time to sell their honey.

It is not too early to try to impress the fact that all table honey should be sold *early*. Better employ extra help, get up a little earlier in the morning, and work a little later to scrape the sections to get them cased and off to market, and don't, *don't* ship your No. 2 (unfinished or stained sections) to the city after the holidays, where they will glut the market. If possible, work them off around home. Sell among your neighbors. Peddle it out to people you know (at less price if need be), and explain to them that it is exactly as good as the fancy white honey in boxes that is so pretty to look at. I am not sure but it would be money in your pocket to cut out this inferior-looking honey, but good in quality, mix it with a first-class extracted, and sell it as bulk comb honey in tin buckets around among your neighbors who know you, and know that your product is the genuine article.

Perhaps some of our friends will think we ought not to draw attention to a dull market for fear of depressing still more. It can't be much worse, and just now the truth should be known in the interest of the future's sake. Perhaps others may feel that we have an ax to grind, as we are honey-buyers. Our business in that line is very small, and we would be perfectly willing to give it up at any time. Our real interest is with the producer. If he can't get permanent good prices he has no use for bee-papers nor bee-supplies. Our ax is also the bee-keepers', and we feel it is *high time something was said, and forcibly, too.*—Editorial in Gleanings in Bee-Culture.

VIRGINIA QUEENS.

Italian Queens secured by a cross and years of careful selection from Red Clover Queens and Superior Stock obtained of W. Z. Hutchinson. I can furnish large, vigorous Untested Queens at 75 cents; after June 15, 60c. Tested Queens, $1.00; after June 15, 75c. Write for discount on large orders.

CHAS. KOEPPEN,
22Atf FREDERICKSBURG, VA.

Bee-Keepers!

Send for our FREE CATALOG. It will tell you how to put foundation in four sections at once; and the only way to get a full section of honey

We sell SUPPLIES AT FACTORY PRICES.

A. COPPIN, Wenona, Ill.
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IT PAYS
to order your
Bee-Supplies and Winter-Cases
NOW, while we can serve you PROMPTLY, and get them at BOTTOM PRICES.

R. H. SCHMIDT CO., Shebuygan, Wis.
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TENNESSEE QUEENS

Daughters of Select Imported Italian, Select Long-Tongue (Moore's), and Select Golden, bred 3¼ miles apart, and mated to Select Drones. No impure bees within 3 miles, and but few within 5 miles. No disease; 31 years' experience. All mismated queens replaced free. Safe arrival guaranteed.

	Price before July 1st.			After July 1st.		
	1	6	12	1	6	12
Untested	$ .75	$4.00	$7.50	$ .60	$3.25	$ 6.00
Select	1.00	5.00	9.00	.75	4.25	8.00
Tested	1.50	8 00	15.00	1.25	6.50	12.00
Select Tested	2.00	10.00	18.00	1.50	8 00	15.00
Select Breeders	$3.00 each					

Send for Circular.
JOHN M. DAVIS, Spring Hill, Tenn.
Please mention Bee Journal when writing

$10,000 WE HAVE JUST COMPLETED OUR TEN THOUSAND DOLLAR BEE KEEPERS' SUPPLY MANUFACTURING PLANT

—and are ready to do business. Write us for leaflet showing our special Hives and prices. It is the greatest bargain you ever saw.

Mondeng Mfg. Company,
147 Cedar Lake Road.
MINNEAPOLIS, - MINNESOTA.
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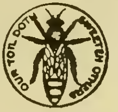
OUR TOIL DOTH SWEETEN OTHERS

A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10c; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

Wanted—Bee-Keepers

To write for our prices on SECTIONS. We manufacture them, and are dealers in BEE-SUPPLIES. Send for special price and Catalog.

AUG. LOTZ & SON,
24A17t CADOTT, WIS.

If you want the Bee-Book
That covers the whole Apicultural Field more completely than any other published,
Send $1.20 to
Prof. A. J. Cook, Claremont, Cal.,
FOR HIS
"Bee-Keeper's Guide."
Liberal Discounts to the Trade.

Italian Queens in the State of Washington....

Long-Tongued Red Clover Queens—Untested, 70c; Tested, $1.00; Select Tested, $1 50. Common Italians same price. Satisfaction guaranteed.

ROBERT MIRRING,
27A1t DRYAD, Lewis Co, WASH.
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Honey AND Beeswax
SOLD BOUGHT

When you run short of Honey to supply your local trade, write to us for prices. We offer it in 60-pound tin cans, 2 cans in a box. Purity guaranteed. We pay cash for pure Beeswax. Price quoted on application. Address,

THE YORK HONEY CO.
HENRY M. ARND, Mgr
101 E. Kinzie Street, CHICAGO, ILL.

HONEY AND BEESWAX
MARKET QUOTATIONS

CHICAGO, May 9.—The market has an over-supply of comb honey, very little of which will pass as No. 1 grade—price is 11@12c per pound, and off grades at a corresponding value. Extracted, 6@7c per pound for best grades of white; amber colors, 5@6c per pound. Beeswax, 30@32c. R. A. BURNETT & Co.

CINCINNATI, O., June 18.—Since warm weather set in, hardly any sales of comb honey are made; what little there was sold, was fancy white and brought from 12½@13½c. Extracted has a fair demand, as follows: Amber, in barrels, from 5¼@5¾c; in cans, ½c per pound more; alfalfa, 6½c; fancy white clover, 7½c. Nice yellow beeswax, 30c. C. H. W. WEBER.

ALBANY, N. Y., June 3.—The honey market is very dull now, and prices nominal. Receipts are very light and demand the same. We quote comb honey, in good order, white, 13@15c; mixed, 12@13c; dark, 10@12c. Extracted, buckwheat, 5½@6c; mixed, 5½@6c; white, 6½@7c. Beeswax, 30@32c. H. R. WRIGHT.

CINCINNATI, June 15.—The demand for honey is slow for this season of the year, which is due to the vast quantities that were held over from last season, and the importation of Cuban honey. We quote amber in barrels and cans at 5¼@6½c; white clover, 6½@8c. Beeswax, 30c.
THE FRED W. MUTH Co.

BOSTON, May 14.—The demand for honey is extremely light, almost nothing, and supplies are heavy for this time of the year, and our prices therefore are largely nominal. We quote fancy white at 15@16c; A No. 1, 14@15c, and No. 1, 14c, with no call for under grades. Extracted, from 6@7c. BLAKE, SCOTT & LEE.

KANSAS CITY, June 25.—The market is about cleaned up on old honey, and there is very little demand at present. There are a few cases of new honey coming, which are being offered at $3.00 per case. No. 1 stock and amber at a little less. There is a great deal of old extracted on the market which is very slow sale.

Beeswax in good demand at 30c.
C. C. CLEMONS & Co.

NEW YORK, June 21.—Very little demand for comb honey. Some trade for No. 1 and fancy white, at from 12@13c, while dark and amber are almost unsalable. Extracted is in fair demand, although prices are irregular. We quote from 5@6½c, according to quality. Southern in barrels, at from 50@55c per gallon.

Beeswax more plentiful and prices are gradually declining. We quote 28@29c.
HILDRETH & SEGELKEN.

PHILADELPHIA, June 20.—It is just between seasons now with comb honey. No sales reported and nothing doing. Our commission markets are at the height of the berry season, and there are few sales made in extracted honey for manufacturing purposes. We quote: Fancy white extracted, 7c; amber, 6c. Beeswax is declining; 28c for best yellow.

We are producers of honey and do not handle on commission. WM. A. SELSER.

SAN FRANCISCO, June 22.—White comb, 1-lb. sections, 12½@13c; amber, 9@11c. Extracted, white, 5½@6c; light amber, 5@5¼c; amber, 3¾@4¼c; dark amber, 3¼@3¾c. Beeswax, good to choice, light, 28@30c; dark, 26@27½c.

Spot stocks and offerings are of rather moderate volume and include very little strictly high-grade honey. For the latter sort the market is firm, although there is no very active inquiry. To effect free sales of common qualities, the acceptance of rather low figures would be necessary.

HONEY AND BEESWAX
When consigning, buying or selling, consult
R. A. BURNETT & CO.,
199 SOUTH WATER ST. CHICAGO, ILL.

WANTED! FANCY COMB HONEY
In no-drip shipping-cases. Also Amber Extracted in barrels or cans. Quote your best price delivered Cincinnati. The Fred W. Muth Co.
32Atf Front and Walnut, CINCINNATI, OHIO

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JAMESTOWN, N. Y.

W. M. Gerrish, Epping, N. H., carries a full line of our goods at Catalog prices. Order of him and save the freight.

I. J. STRINGHAM, 105 Park Place,
NEW YORK

Manufactures and carries in stock every artice a bee-keeper uses. BEES AND QUEENS IN SEASON.
Apiaries—Glen Cove, L.I. Catalog free.

ST. LOUIS, 1904.

Bee-Keepers' Supplies Galore.
Catalog Free.
A No. 1 Smoker by mail, $1.

Bees, Honey and Beeswax bought and sold for cash.

LEAHY MFG. CO.,
1 ALTA SITA, EAST ST. LOUIS, ILL.

Rush Orders

Are pouring in, but we are filling them (almost every single one) within a few hours after they are received. We can ship

Sections, Comb Foundation, and Dovetailed Hives
UPON RECEIPT of ORDER
in regular packages.

Open Day and Night.
Shipping Facilities Unequaled Anywhere.

G. M. Scott & Co. 1004 East Washington St.
INDIANAPOLIS, IND.

The Demand for

Moore's Strain of Italians

becomes greater each year. The following report shows the reason why:

EXCEL IN STORING CAPACITY.

B. S. Taylor, a large honey-producer of Perris, Cal., who sent me an order for 75 queens at one time, says:

"I have a large apiary mostly of your stock, and I have never, in my 30 years' experience, seen so quiet and gentle bees to handle, and in storing capacity they excel anything I have ever had."

Untested Queens, 75c each: six, $4.00; dozen, $7.50. Select Untested, $1.00 each; six, $5.00; dozen, $9.00.

Safe arrival and satisfaction guaranteed. Descriptive circular free.

I am now filling orders by return mail, and shall probably be able to do so till the close of the season.

J. P. MOORE,
27Atf MORGAN, PENDLETON CO., KY.

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27th Year **Dadant's Foundation** 27th Year

We Guarantee Satisfaction. What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS. PATENT WEED-PROCESS SHEETING.

Why does it sell so well? Because it has always given better satisfaction than any other. Because in 26 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material.
We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies
OF ALL KINDS.

Langstroth on the Honey-Bee—Revised
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

DADANT & SON, Hamilton, Hancock Co., Ill.

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MILLIONS
OF SECTIONS
THOUSANDS
OF SHIPPING-CASES

BEWARE
WHERE YOU BUY YOUR
BEEWARE
WATERTOWN, WIS U.S.A.
MAKES THE FINEST

Ready for Prompt Shipment.

G. B. Lewis Company
Watertown, Wisconsin, U.S.A.
Send for Catalog.

AMERICAN BEE JOURNAL

44th Year. CHICAGO, ILL., JULY 14, 1904. No. 28.

MISS EMMA M. WILSON.

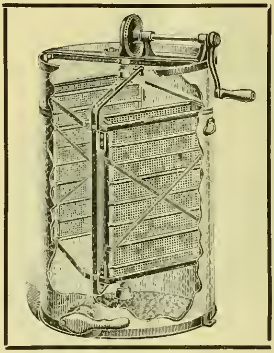
APIARY OF L. A. ASPINWALL, OF JACKSON CO., MICH.

TIMBER-CLAIM OUT-APIARY OF R. C. AIKIN, OF LARIMER CO., COLO. (See page 484)

DR. C. C. MILLER.

LABOR-SAVING DEVICES.

Cowan's Honey-extractor.



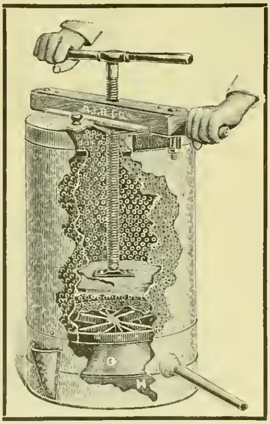
During the last few months considerable time has been spent on the improvement of the Reversible Extractor. The arms of the reel are made of regular channel iron, with a hub formed of sheet metal riveted together, making the reel stronger, and lighter in weight. By the use of planed teeth on the bevel gear it produces less noise, and makes the machine run easier. We make them in the following sizes for L. frames:

No. 20—Two-frame, 24-inch can	*$16.00*
No. 25—Four-frame, 28-inch can	*23.00*
No. 30—Six-frame, 31-inch can	*30.00*

Many other sizes and styles.

"We have used quite a number of extractors in our work, and find that it pays to keep up with the times and use the latest improved styles, and now use the COWAN. For general use the four-frame extractor gives the best results. There is no doubt but a two-frame extractor could be worked to advantage in a large apiary. It is certainly a fact that, in a two-frame extractor, the combs are so near the center, the labor of turning the machine is trifling."

"Old Grimes" in the *American Bee Journal.*



The German Steam Wax and Honey Press.

We feel that we have filled a long-felt want by offering this Wax and Honey Press. By putting in the combs and applying pressure, all the honey can be obtained from them. Then by applying steam and more pressure the wax can be drawn off, thus obtaining all that is possible from your combs. The same machine can also be used for an uncapping-can. It is something every bee-keeper should own. Made in only one size. **$14.00**

Foul-Brood Inspector McEvoy, of Canada, Says:

Woodburn, Ontario, Apr. 25, 1904.

FRIEND ROOT :—Your wax-press received and tested. It is certainly one of the best and most profitable articles ever gotten up for the benefit of bee-keepers, and will soon go into use in every section where bees are kept.

Yours very truly, WM. MCEVOY.

Send for Catalog. - - Extractors and Presses in Stock at Branches and Principal Agencies.

The A. I. ROOT Company,

BRANCHES: Main Office and Works, Medina, O., U. S. A. BRANCHES:

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ST. PAUL, MINN., 1024 Miss. St.
HAVANA, CUBA, San Ignacio, 17.

San Antonio, Tex., 438 W. Houston.
Washington, D.C., 1100 Md. Av., S. W.
NEW YORK CITY, 44 Vesey St.

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THE OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL
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GEORGE W. YORK, Editor. CHICAGO, ILL., JULY 14, 1904. Vol. XLIV—No. 28.

Editorial Comments

Photograhps of Things Apiarian.

This is a splendid time of the year to take photographs of apiaries and other things of interest to bee-keepers. Nature is at her best now in many parts of the world. Never again will the apiary look more attractive than in June or July, in perhaps the majority of localities where bees are kept.

We are always wanting good apiarian photographs with which to illustrate the pages of the American Bee Journal. Many of our readers have kindly sent them in. Of course, we have not used all of them. Some were not clear enough to make good engravings. We never promise to use a certain picture until we see it. But the majority of photographs usually make fairly good engravings.

Why not have a photograph taken of whatever you have that you think would interest other bee-keepers, and send it to us? If we can use it, we will notify you on its receipt, and likely request some reading matter to appear with it in the American Bee Journal.

The kodak time is now right here—
Most picturesque season of the year.

Self-Spacing vs. Loose-Hanging Frames for Extracting.

While perhaps all admit certain advantages in having frames that space themselves automatically with rapidity and accuracy that can not be approached by loose-hanging frames, there is wide divergence of opinion as to the advisability of using such frames in the production of extracted honey. At the one extreme are those who say it is out of the question to think for a moment of using such a frame, because the spacer interferes with the free use of the extracting-knife. At the other extreme are those who say that after a large experience with both kinds of frames in the production of extracted honey, they would not for a moment think of using loose-hanging frames.

Very likely the kind of frames and spacers used may account in part, if not entirely, for such great difference of opinion. Take a frame with top-bars ⅞ wide, with spacers on each side at each end, or even on one side at each end, and the interference with the knife, especially with metal spacers, will be something not to be endured. There will also be trouble in the extractor, with spacers projecting one-half inch or more. No wonder that those who have tried such frames for extracting should prefer loose-hanging frames.

The case is different with a different frame-top and end-bars 1⅛ wide, spacers consequently projecting only ¼ inch, the spacers on one side only at one end, and on the other side at the other end; such a frame would make little trouble in the extractor, and as the spacers are only at one end on each side, the operator could always cut away from them, interfering with the knife not enough to overbalance the advantages of such frames.

Florida Orange-Blossom Honey.

A beautiful example of the good fellowship that exists between editors of rival bee-papers appears in the June Bee-Keepers' Review, by way of a picture of orange blossoms that is a gem, accompanied by an article on orange-blossom honey by W. S. Hart, both picture and article being loaned to the Review by Editor H. E. Hill *before* its appearance in his own paper, the American Bee-Keeper.

According to Mr. Hart, the shipping of tons of honey from Florida under the mark of "Orange Blossom Honey," seems little short of fraud." "As this honey all comes from locations to the north, and outside of the orange-growing districts of the State, it is not possible that it could have come from the orange blossom."

Too much can hardly be said in praise of orange-blossom honey as to color, body, and flavor, but the quantity of nectar yielded is not abundant. Mr. Hart says:

"I think I am safe in the assertion that a barrel of *pure* orange blossom honey was never shipped from this State."

The special value of orange blossoms lies in the fact that they yield large quantities of pollen that greatly aid in building up colonies in February, March, and early April.

The Experiences of Bee-Keeping.

We suppose quite a number of our readers have heard, or have attended, a Methodist class-meeting, or experience-meeting. Those in attendance arise, one after another, and relate their experiences in spiritual matters, and thus are strengthened and encouraged in their religious life.

Now, what the class-meeting is to the devoted Methodist, we desire that the old American Bee Journal shall be to its readers—a place where they can exchange their apiarian experiences, and gain helpful information and encouragement in their work and study among the bees. Hence, to each one of our readers who thinks he or she has discovered something that will help some one else, we extend an invitation to sit right down and describe it as best they can, and send it to us for the American Bee Journal. If a goodly number will do this, it will make this journal more valuable than ever to all.

Perhaps it is not so easy to write with a pen. Then use a lead-pencil. We are not particular, only so it is as plainly written as you can write. We do not expect that it will look like copper-plate work, or engraving. Just do the best you can, and we will attend to the rest. Get down the facts in simple language, just as you would write a letter to a friend. No one expects eloquence in a bee-paper. Just plain, sensible, business-like talk is what is wanted. That's all.

Now, no doubt during the present season there will be many a new apiarian experience that ought to be written up (or down), and published for the benefit of all. We can take care of the publishing end, if you will attend to sending us the story.

Hybrids or Italians—Which?

Under this heading, in Gleanings in Bee-Culture, G. M. Doolittle advises the honey-producer to breed from a good queen, allowing the young queens to mate with any drones they might chance to meet. He does not say so, but he would, of course, expect the honey-producer to buy a new queen to breed from as often as the old one should die. A large number of honey-producers would be likely to improve their stock by following this course rather than to follow their present course of hit-or-miss rearing of queens without regard to either father or mother, but many will prefer to make some effort toward selection of both sire and dam. Admitting that a cross gives vigor, it will hardly be contended that all crosses are alike. Suppose two daughters of the same queen, one mating a drone of the very poorest stock, the other meeting one of the very best. Are those two young queens likely to be of equal value?

Location of Bait-Sections in the Super.

The general practice probably has been to put one or more partly drawn sections in the center of the super, in order to induce the bees to begin work in the super more promptly than they would without such inducement. Of late, there is some tendency toward putting baits in the corners of the super rather than in the center.

There is something to be said on both sides. With the bait in the center, work will begin in the center, gradually extending outward, and the central sections will be finished while the corner sections are not yet filled. With baits in the corners the work will be more evenly distributed from the start, and there will be a more even finishing of the entire super.

But if baits are used in the corners, it is absolutely necessary for even work that there be at least one section in each corner, making four times as many baits needed as when putting baits in the center. Moreover, a single bait in the center will start work in the super a little sooner than will four corner baits; and that little is sometimes a very important matter.

Some have no difficulty in taking the unfinished sections from the corners of several supers, massing them in a super and returning them to the bees to be finished. For these the best plan may be to use a central bait. Those who can not get good work by such returning may do well to plan in advance to have the number of baits quadrupled in order to use them in the corners.

"**The Hum of the Bees** in the Apple-Tree Bloom" is the name of the finest bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us *one new* yearly subscription to the American Bee Journal at $1.00.

Miscellaneous Items

Mr. T. O. Andrews, to whom we referred recently as having been elected to the presidency of the California National Honey-Producers' Association, was elected to fill the vacancy caused by the resignation of Geo. W. Brodbeck from the board of directors of that organization. The vacancy in the presidency had not yet been filled when last we heard, but doubtless will be soon. We were clearly mistaken in the former statement that we published.

* * *

A Midsummer Fair is to be held July 22 and 23, on the grounds of Mr. Leiter, on Lake Geneva, in Wisconsin, for the benefit of the Lake Geneva Fresh-Air Association. An elaborate premium list has been prepared, in which is the following, under the heading of "Apiary:"

> Best case of comb honey, not less than 24 sections.
> Best extracted honey, not less than 6 one-pound jars.
> Best one-frame nucleus hive, with bees.
> Best general exhibit.

For further information, address the secretary, George F. Porter, Lake Geneva, Wis.

* * *

Fourth of July at Dr. Miller's.—For several years Dr. Miller has extended to us (Mrs. York and the writer) a most cordial invitation to come to Marengo and help eat fresh from the vine some of the luscious strawberries that grow on his farm, which is located a mile south of the town.

Finally, we decided to go, and did so on Saturday, July 2, arriving in Marengo about 7 o'clock in the evening. Very shortly after arriving and greeting the members of Dr. Miller's family, we began to eat strawberries. We had them every meal until Monday evening; and then, lest we should too soon lose the "strawberry-eating habit," we brought several boxes of them home with us. We certainly never ate more delicious strawberries.

On Sunday we attended the Presbyterian church and Sunday-school, being members of Dr. Miller's Bible class. In the evening there was a patriotic service, there being also present members of the Grand Army Post and Woman's Relief Corps. The popular pastor, Rev. Mr. Van Page, delivered a fine address appropriate to the occasion. The music by the choir was in excellent keeping with the rest of the service.

All day Monday—the Fourth—we visited and talked bees. We went into the home apiary and opened a few hives, but it was a little too cool to do the best work with the bees.

Dr. Miller had supers on such colonies as were ready for them, a few hives showing three supers each. He had taken off only two supers full of honey. White clover seemed to be in abundance, with white sweet clover just coming into bloom. Previous to the opening of the honey season, the Doctor had, all ready to put on the hives, 26,000 sections in supers. His faith seemed to be large. We hope he may have all those sections filled with honey by the end of the season.

Dr. Miller's family consists of Mrs. Miller, her sister (Miss Emma M. Wilson), and their beloved mother, Mrs. Wilson, who is 84 years of age. She is a dear old lady, eats her three meals a day, and is as happy and contented as any one could well be. What a benediction is such a person in any home!

On the first page are the latest pictures of Dr. Miller and Miss Wilson, the photographs having been taken about two months ago. Especially pleased will be the women of beedom, who receive the American Bee Journal regularly, to see the picture of the one of their number who so ably and entertainingly conducts the department of "Our Bee-Keeping Sisters" in this journal. We are sure all would be glad to know her better, or to have the privilege, as we have had, of spending a day or two under the same roof with her in Dr. Miller's delightful home. But the next best thing is to have her picture and read her department from week to week.

Dr. Miller holds his 73 years exceedingly well. We only hope that he may be spared to the world yet many years. All beedom does well to hold him in the highest esteem and honor. He deserves it. There are too few like him in the world.

Contributed Articles

Notes of an Inspector of Apiaries.

BY HERMAN F. MOORE.

THERE has been a good deal of talk about foul brood near Chicago, but no one can appreciate the actual conditions existing so well as the inspector who visits many apiaries and finds yard after yard diseased in all stages. The discouraging feature about it all is the indifference often shown by those most interested.

In one front yard a single colony remains alive. A short examination without smoke shows 3 frames of bees and brood nearly destroyed by foul brood. Two or three other empty hives are near, the colonies of which were likely killed by the same disease. About a mile away a fine apiary of 26 colonies was examined and ⅔ of them are found infected. The owner of the 26 directed the inspector to the front-yard colony, saying his bees might have gotten it there. The owner of the 26 is out from $75 to $100 by the disease. He also told the inspector he had allowed the bees to clean out an empty honey-barrel, from Wisconsin. But that being over a year ago, was not, in this case, the source of the disease. Bee-keepers cannot be too careful about feeding their bees on strange honey. Better sell the honey and feed sugar syrup in all cases so as to run no risk.

At another apiary 3 colonies nearly dead with foul brood are found. The old German lady told the inspector that they burned everything up—bees, frames, hives and all. She was advised to burn up the frames and brood at once, for the sake of neighbors. Said she would see to it.

About a mile from the infected colonies was another apiary of 4 colonies. The lady told the inspector they had no disease, that they were right up-to-date. She had sold 50 colonies lately to a farmer a couple of miles away. She gave no opportunity to examine the bees. After finding 3 colonies badly diseased the inspector called again at this apiary and warned them of the disease about a mile away. The advice given was to call at the diseased apiary and make friends with the people and try to have the diseased colonies destroyed at once.

In several of these cases the inspector should have been able to burn up and treat the disease right on the spot. There is great need for a law giving the inspector power to burn or cure, in his discretion.

The inspector has been against formaldehyde as a remedy up to this time. However, it seems as if this agent would be useful in saving combs, with a slight modification of the present method. A chemist told the inspector that formaldehyde had a great attraction for water. He said it would form a combination with the water in honey after a long fumigation and no doubt destroy all germs of foul brood in the honey. It might be a very long process and hardly practicable in ordinary cases.

Now, if we can dip the best of the combs in water (say soft, warm water) and jounce them up and down repeatedly, so the water will penetrate every part and soften the honey in the cells, may it not be that the formaldehyde and water will do a thorough job and make the combs safe to use?

The writer will be greatly obliged to any one who has the facilities (Mr. France, for example,) if he will try this and report in the American Bee Journal.

Cook Co., Ill.

Does Honey Absorb Water Naturally?

BY J. E. JOHNSON.

I BELIEVE I first asked this question, which has drawn out considerable discussion. Mr. Latham gives account, on page 261, of an experiment where honey did absorb water so as to increase in both weight and bulk. His experiment is valuable, as it shows that honey does have some affinity for the moisture of the air, but it also shows that honey is not a true deliquescent. It also shows that even though he had the honey confined in a bell-glass it did decompose to some extent though he does not admit that it did.

In the account of Prof. Shutt's experiment he demonstrated that honey gained so as to double its bulk, or nearly so, in three weeks. I suppose Mr. Shutt also confined honey in an air-tight compartment and burned hydrogen to produce the water. While I do not in the least doubt the accuracy of both Mr. Latham's and Prof. Shutt's experiments, I do say they mislead in the real facts, for just *one reason*, and that is this:

The honey in an air-tight compartment is *not* subject to the law of evaporation, while the honey as we store it in any room which is sufficiently ventilated, *is*. We must bear in mind that a natural atmosphere becomes moist because of evaporation, *and from no other cause*.

Mr. Latham's experiment shows plainly that the law of evaporation is much stronger than the affinity of honey for water, as he admits that even the tiniest crack caused the air to become dry. Why? Because of evaporation. Neither could he get the honey to absorb any of the moisture except when inclosed, and then burning hydrogen. Now hydrogen will not burn except when supported by oxygen. Not only so, but it *always* unites with the oxygen to produce water.

It was only a question of how much hydrogen he used in combustion to produce a certain amount of water, and as the compartment was air-tight the honey got the water; but even the tiniest crack, and the honey was powerless. Had there been no honey in the bell-glass, water would have collected on the sides of the bell-glass, by lowering the temperature. Let me quote a few words from Prof. Storer, professor of chemistry in Harvard College:

"No matter in what way hydrogen is burned, the product is always *water*. At the high temperature of the *flame* this water must, of course, remain in the condition of gas, but it can readily be brought to the liquid state by reducing the temperature. Over a jet of burning hydrogen, best obtained from a gas holder, hold a dry, cold bottle. The glass soon becomes covered with a film of dew, as the water generated by the union of hydrogen and oxygen condenses in droplets upon the cold sides of the bottle."

Water will not burn naturally; not only so, but it subdues conbustion; but by chemical experiment the two gases composing water (oxygen and hydrogen) can easily be separated, and the one gas (hydrogen) supported by the other gas (oxygen) will not only burn readily, but cause great heat.

In fact, many things can be accomplished by chemical experiment that do not take place in Nature.

Such old and experienced bee-men as Dr. Miller, L. L. Langstroth, A. I. Root, etc., have for many years taught us that a model place to store honey is in a garret where the thermometer will reach nearly 100 degrees. Why? Because when honey is in a warm, airy room the law of evaporation has power to draw the water from the honey, whether it be liquid or comb honey. And, not withstanding this is a fact, such an atmosphere is heavily laden with moisture, which you can readily prove by drawing a pitcher of very cold water and placing in that room. The water will collect in abundance on the outside of that pitcher. Why doesn't the honey get some of that moisture? No; honey is continually giving up its moisture, while the cold sides of a glass pitcher have power to collect, owing to low temperature. So we must bear in mind that ventilation is one of the most essential means of ripening honey.

Mr. Latham says we should bear in mind that there should be an air-tight partition between honey and air. Certainly not. Air is the very element that ripens honey and makes it good. When honey is stored rapidly the bees will not cap it over until they give it lots of air, by ventilating or fanning a current of air through the hive.

Mr. Latham says honey did not decompose during his experiment, yet admits that it lost its volatile oils. If he will think again he will have to admit that the honey must undoubtedly have decomposed to just the extent of its loss.

If he will read on page 318 (1903) he will find an account of Prof. Shutt's experiment in determining water of honey. Prof. Shutt says that he contends that what we have been supposing to be water only, is really in part the decomposed products of the honey. Furthermore, he says: "*Evidently there was no stopping-place, and what we were calculating as water was really in large part due to decomposition of the honey.*"

In conclusion I wish to say just this: We can be emphatically sure that it is only a question of time between thin honey and sour honey, and a warm room will make it sour all the quicker unless there be plenty of ventilation. Ventilation is the important part. Mr. Latham used calcium chloride to dry the air and honey. Why? Because calcium chloride is a true deliquescent substance, and not only took the water from that air, but from the honey as well.

Knox Co., Ill.

Defense of Sweet Clover and Its Honey.

BY R. C. HUGENTOBLER.

I THINK Mr. Hasty all too hasty in confirming the sentence passed upon sweet clover, on page 745 (1903), by Mr. Walter S. Pouder. Mr. Pouder makes two indictments against sweet clover:

1. That, blooming with white clover, and mingling its inferior nectar with that of white clover, "it has greatly lessened the value of our white clover crop in central Indiana and southern Ohio."

2. That "it yields a surplus this year, the first since the National Bee-Keepers' Association met in Indianapolis, in 1886."

As Mr. Pouder speaks for southern Ohio, and as I am a southern Buckeye, the bee-keepers' lullaby, "locality," has no effect upon me, and I am compelled to break the silence of years in defending that bee-intoxicant—sweet clover.

I shall pass by the charge against sweet clover, of dispensing intoxicants which change the "busy" to the "boozy" bee, with the remark that the legality of such business is beyond the tribunals of man, as he himself has legalized and been engaged in the gigantic slaughter of the years, and address myself to the foregoing indictments.

In regard to the first, I must say that there is but a remote possibility of the adulteration of white clover honey by the busy bees in southern Ohio. The reason of the remoteness of the possibility of adulteration is, the remoteness of the thing to be adulterated. There is plenty of sweet clover honey every year, but you can not adulterate nothing; neither can the bee. I will affirm, for southwestern Ohio, that between the years 1897 and 1903 there was not a single pound of surplus white clover honey produced. Sometimes within this interval there was an abundance of bloom, but it persistently refused to yield the much-desired sweet. During this same interval sweet clover failed not for a single season to produce enough surplus to make bee-keeping possible.

It is a well-known fact that in southern Ohio the sweet-clover flow commences about two weeks later than from white clover, and ends about two weeks later than the same. Even if white clover were a reliable nectar-producing plant in southern Ohio, (which it is not), one-half of the white clover nectar would be gathered before the sweet clover commenced to yield, and the last two weeks of the sweet clover yield would be gathered after white clover had ceased to produce nectar. Thus, the two clovers would be yielding simultaneously for about two weeks, if we allow four weeks for the time of the clover flow, which is a fair estimate. Thus but two weeks of the white clover crop could be affected by the sweet clover honey being blended with it, while two weeks of the sweet clover crop would be gathered separately. In the crowded districts of southern Ohio the two weeks of the sweet clover yield being simultaneous with that of white clover, it would be an immense boon to the bee-keeper, as it would furnish remunerative employment to the millions of toilers that make their daily onset on the flowers.

If the white clover pasturage were sufficient, and sweet clover the scanty yielder it is said to be, the argument against sweet clover would, nevertheless, fail; for the law obtains that bees work on the bloom giving them the greatest returns for their labor, so there would be no admixture of sweet clover honey with that of white clover.

I think, then, that the argument made against sweet clover is an argument in its favor; and my conclusion, supported by the arguments based upon either of the premises, is, that sweet clover holds its head high among the nectar-producing plants of central Indiana, and smothers out all competitors in southern Ohio.

Eliminate sweet clover from southern Ohio, and destroy the last vestige of an apiary? No! Let it adorn the dusty highways and clothe the naked hillsides; let it clamber up frowning precipices and leap across deep gullies; let wind and wave conspire to extend its dominion and enable the winged millions to sip from its enticing bloom.

Hamilton Co., Ohio.

Convention Proceedings

Report of the Michigan State Bee-Keepers' Convention.

BY E. B. TYRRELL, SEC.

The annual convention of the Michigan State Bee-Keepers' Association was called to order with Pres. W. Z. Hutchinson in the chair, at Agricultural College, at 1:30 p.m., Feb. 25.

The report of the Secretary was read and adopted.

DISCUSSION ON FOUL BROOD.

Next followed a discussion on foul brood. Mr. C. A. Huff believed it is not necessary to disinfect the hives. He asked the experience of those who have tried shaking bees for foul brood.

Pres. Hutchinson said it does not develop very often afterwards.

Randolph Graden had reason to believe that robbing will not spread the disease. He had a neighbor who had 8 or 10 colonies of bees located 30 rods from his apiary where he had foul brood. One day this neighbor's bees were found robbing out an infected hive, but the robbers did not contract the disease. Mr. Graden said he could cure foul brood in every case; that he had tried all methods down to ground coffee without effect. His method was to take the bees, when honey was coming in, and shake them in a box, leaving them there until they swarm out, when they are hived in a nice, clean hive. He then destroys all combs, and boils the honey. He believes foul brood is carried by the wind.

Leonard Griggs asked if it were not possible for the nurse-bees from an infected hive to be carried by the wind to the wrong hive, and then spread the disorder by the honey carried with them. It was thought possible it might be carried in that way.

STORING HONEY IN LARGE TANKS.

QUES.—"Why store honey in large tanks?"

G. A. Black uses 20-gallon jars just to ripen the honey in. He allows 75 to 80 percent to be capped before extracting.

S. D. Chapman said there is no question but what a large tank allows better evaporation, and thus a better article of honey. He has raspberry honey weighing 12 pounds to the gallon.

Mr. Huff uses enough combs to hold the crop, then after extracting stores it in a large tank. He is satisfied that he thus gets a better article.

Mr. Tyrrell uses and advocates the use of large storage-tanks, his tanks holding one ton each. By their use he gets a better-ripened and a better-settled article. All but two barrels of his honey last year was stored in large tanks. These two barrels were filled while extracting from nearly sealed honey, but, when heating for bottling, the honey could not be gotten nearly so clear as that stored in the tanks.

C. F. Smith thinks the honey gains nothing by being stored in tanks, but wants all honey sealed before extracting. He thinks that no honey candies firm unless it is sealed before extracting. He has used jars to ripen, with poor results.

Mr. Tyrrell said that candied honey melted, then allowed to candy again, is much finer grained than before being melted; but possibly if the honey had been stirred the first time while candying it might be finer grained.

Pres. Hutchinson said that in New York bee-keepers seem to favor large tanks. Some advocate the use of artificial heat.

Mr. Wood has lard cans to store in. He never opens them until he is ready to melt the honey. He finds the 50-pound size the best. He strains the honey through cheese-cloth when he puts it in the cans.

Mr. Black can not get honey to run through cheese-cloth.

Pres. Hutchinson described a strainer he saw in California, used by "Rambler," which was simply a long piece of cheese-cloth on rollers. The cloth was simply unrolled from one roller and rolled up on the other as fast as it got too dirty to strain well.

Mr. Wood uses one strainer for each can.

ALSIKE CLOVER FOR HONEY—RIPENING HONEY.

QUES.—"What has been the success in alsike clover for honey?"

Mr. Black raises a good deal of alsike, and has a good deal of alsike honey. He says the honey is good, and weighs 13 pounds per gallon.

George A. Stray says alsike honey is as good as any produced.

Mr. Wood finds alsike honey extra-good.

W. D. Soper believes alsike honey is good. He didn't think that standing in open tanks was beneficial to honey, but that honey is all right to bottle when extracted. He thinks tank honey isn't so good, and said that any honey on which rises a scum when heated isn't sufficiently ripened.

Mr. Huff differs from Mr. Soper on the rising of scum; some of the best honey in his experience will have it when heated.

Mr. Ludington had some experience with sour honey, and found that heating it improved its flavor. This honey *soured before being extracted.*

Mr. Graden took off some honey once as soon as it was capped, and it sweat badly. He put it back on the hives, and the cells that sweat were emptied by the bees and filled with dark honey.

Mr. Wood gets his honey well ripened without getting travel-stained, by putting a piece of wire-screen between the supers and the bees.

GETTING BEES OFF EXTRACTING-COMBS.

QUES.—"How to get bees off combs for extracting?"

Mr. Chapman has taken off as high as 3000 pounds in one day. He takes out the combs and shakes off the bees, then sets them down until all are shaken, when he finishes by brushing.

Mr. Ludington and Mr. Huff use bee-escapes.

Mr. Chapman does not use escapes on account of robbing.

Mr. Leach asked if combs do not sometimes break by shaking.

Mr. C. Cady advocates wired frames.

Mr. Leach does not use wired frames.

Mr. Wood uses wired frames.

Mr. Leach extracted 900 pounds with the help of a boy from 9 o'clock to 3 o'clock.

Mr. Huff puts on escapes in the evening for what he extracts the next day.

DEEP OR SHALLOW FRAMES—WHICH?

QUES.—"Which are preferable, deep or shallow supers?"

Mr. Wood began bee-keeping in 1878, and from his experience would advocate shallow supers. He can take off four shallow ones to one deep one.

Mr. Tyrrell asked if they can extract fast enough with the shallow frame. Some thought they could, others thought not.

At a call for hands, three favored bee-escapes for extracted honey, and five were against them.

(Concluded next week.)

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get them subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.

◆

See Langstroth Book Offer on another page of this copy of the American Bee Journal.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Sulphur and Honey for Rheumatism.

Honey thickened with dry sulphur—a teaspoonful every morning—has cured some cases of rheumatism.—National Stockman and Farmer.

Some of the sisters might try this and report.

◆

Bee-Literature for the Common People.

Three years ago this summer a Mrs. Brundage, from Chicago, came to me to get all the cases of honey I could spare—she wanted it for herself and neighbors. She said she could not get anything but manufactured honey in the city. I gave her the address of George W. York & Co., and told her I would not be afraid to give her all I was worth if she got anything but pure honey there.

After I explained and told her all I could, I said, "To make a long matter short and to the point, if we bee-keepers fed that stuff you speak of to our bees, it would be just like throwing your pocketbook full of money into the fire; it would be the end of all and both."

She is a woman with a fair education, and after she had started off she stopped her horse and called back to me, "Oh, I thank you ever so much for what you have told me; I feel so much better." She certainly must have had a horror of manufactured honey to hire a horse to go through this country in different directions for "*pure bees' honey*," and hire it taken from 2½ to 7 miles to the depot, and pay express charges from here to Chicago.

An old man who gets a dollar's worth of honey of me each year, got some of the fall honey of another bee-keeper, and told him, "I know Mrs. Bartrum feed dem bees some things dat makes dat terable vite honeys." I said to him, "Of course, you explained the difference in the color of the early honey and the fall honey, didn't you?" He said, "No, I did not; do you think I would argue with such old drones?" I think they are just the ones to work at.

I do wish one of the big bee-men would write a book on bees, from the beginning to the present, about honey and all the flowers and plants that produce honey. Write it so that children under 14 years of age can comprehend it. Make it as fascinating as the "History of Birds," and have it introduced into our school libraries. I am sure if you would attend one of the teachers' institutes you would not find more than one—or perhaps not one—who can tell any of the whys and wherefores of bees. I think it just as important a study as to take a horrid snake and dissect for the scholars. And a book on all the honey-plants of the different countries would be nice in their libraries. Our school has a lovely library, with histories of birds, animals, insects, our big men, and just about everything excepting bees and honey-producing plats, and I do think a flowery written book on those subjects would be a blessing to this growing generation, and the author would reap a good thing from it.

The two road commissioners, that repair the road here, are two old Norwegians that try to kill all the lovely sweet clover, and let grow all the horrible old burrs and obnoxious weeds you can think of, and they think it is all right.

If some good writers could roll up some good bee-facts in a miserable old dime novel, some of these fellows that won't read the bee-papers might swallow it like a bitter pill rolled in sugar, and after it is down it would do its work. So the good bee-work rolled in the cheap novel would have an effect on a certain class.

I have a friend, a smart woman, well educated, and a doctor's wife, who thinks and says that "honey don't cost bee-keepers anything." And a young man I know, who owns a big farm, and is considered quite smart, has a few colonies of bees in box-hives, but never has any honey; he would not give a man 50 cents a colony to transfer them to good hives; and he thinks the bees make their honey in the winter. Rich as he is, it would kill him to take a bee-paper. And there are so many like him that would not read a bee-paper, that might get it into their heads through their children from the school library, if there were such books in it. I could tell of so many such people, and they would be more apt to read such articles in our county papers than in anything else.

My father (Hiram Havenhill) was a very successful beekeeper, and took the American Bee Journal a number of years. MRS. H. W. BARTRUM.

Kendall Co., Ill.

So Few Bees.

Alsike and white clover are blooming profusely, but the bees are so few to gather the honey. They are working nicely, though. MRS. NELLIE G. PAXSON.

Erie Co., N. Y., June 28.

Value of Honey in Cooking.

I wish every one knew the worth of honey for cooking. The cost per pound may be more than sugar, but it is nevertheless cheaper to use in making cake, because cheaper fats and less eggs may be used than when sugar is; and, what is more, the cake or pudding may be eaten without harm by those with the weakest stomachs, and they seem to be complete food.

Where there are children, nothing could be better. They like and need sweets, and if you add good milk to the bill of fare, you will have one no child will find fault with.

If less sawdust and straw, under the name of "breakfast foods," were used, and more honey-cakes made and consumed in their place, there would be less sickness and weak stomachs than at present.—MRS. S. A. SMITH, in the American Bee-Keeper.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Likely a Harmless Worm.

I have one colony of bees which is not doing well. The other day I found at the entrance of the hive a large worm, of reddish color, that had 6 legs, and then a space, and then 6 legs more and a little bunch of hair. Is there such a worm that bothers bees? If so, what is the remedy for getting rid of it? INDIANA.

ANSWER.—I know of no worm of that description that troubles bees. It probably got there by chance, and was doing no harm to the bees.

Queenless Colony—Diseased Brood.

1. I have 4 colonies of bees, one of which has been queenless since early in the spring, and I can not get them to rear a queen by giving them brood or queen-cells with eggs in them. They have started queen-cells several times, but they tear down the ones I give them.

I sent for a queen this spring, and before I had time to introduce her she died, and so of course the colony is still queenless. What would you advise doing with it? It is a moderately strong colony, kept strong by the brood that I have put in, *perhaps*. Shall I unite it with another colony, or not? If so, how shall I proceed?

2. The other 3 colonies have diseased brood, like a sample I mail you. What do you think is the matter? Is it pickled brood, or what? In the spring there was only a little that way, but now there is lots of it dead. If it is pickled brood what can I do for it? Is it contagious?

I am a new hand with bees, having kept them only two years, and this is my first trial asking questions; but perhaps you can tell what I am wanting to know. UTAH.

ANSWERS.—1. Better unite with other colonies. At a time when bees are busy gathering, set a comb covered with bees in any colony that needs it, or shake the bees down in front of any hive you want them to enter. Before giving the bees to another colony, pound and smoke them to get them to fill up with honey.

2. The sample sent arrived, was in a pulp, and didn't look like comb—appeared as if it had been cooked. Being in a tin box, and quite a bit smaller, I suppose, than the box, it had pounded about in the box, and being pretty warm had become pounded into a mass. From what little I could judge about it, I should think it quite possible that it is pickled brood, but I am not an expert in brood-diseases, and advise sending a sample to one who is, as Dr. Howard, or one of the foul-brood inspectors.

Swarming and Drones—Carrying Out Brood—Transferring.

1. Do bees ever swarm before they have drones?

2. What makes bees carry out brood, a few at a time, for weeks? They are in an old, mothy hive, and I want them to swarm, then in 21 days transfer the rest. They are quite strong now.

3. Which is best to transfer on to, brood-foundaton or old combs? MAINE.

ANSWERS.—1. I don't know. Certainly it is a very rare thing, but I suppose it might happen.

2. Very likely they are carrying out brood nearly mature, just because they are in "an old, mothy hive," the young bees being injured in the cell by the wax-worms.

3. Fully completed comb is generally preferred to foundation.

Dividing Colonies—Untested Queen.

As I am an old, worn-out soldier I thought I would try the bee-business. I notice untested queens are spoken of in the American Bee Journal, and I have enough bees in one hive to make 2 good colonies. Would they do all right to divide them and put such a queen with them? If so, how and when would that queen become fertile? INDIANA.

ANSWER.—It would do all right. An untested queen is not, as you seem to suppose, a virgin queen, but a queen that has been fertilized and is laying. She is called untested because she is sent off before her worker progeny have emerged to show by their markings whether she has been purely mated.

Please don't send a stamp when you send questions. I don't send answers by mail, and your subscription to the American Bee Journal entitles you to answers without stamps.

Swarming—Putting On Supers, Etc.

1. As I have had no experience with swarming, I am a little puzzled at hive No. 1. It is quite heavy with honey and full of bees, with a clipped queen. The bees are, or have been, boiling out in front of the hive and under the alighting-board by the pint, day and night. How would you manage in this case? The queen does not seem to want to come out.

2. What are the best noticeable signs just before swarming?

3. Is it all right to put one super on top of another and leave until fall?

4. What time of day is swarming most apt to take place?

5. Is it absolutely necessary to put on queen-cell protectors?

6. Will not the virgin queen fertilize with her kindred drone all right? If not, how are we to manage to keep our good stock from running out? MISSOURI.

ANSWERS.—1. A clipped queen will issue with a swarm just as readily as one with whole wings. If the bees cluster outside by the pint day and night, it may be merely because they are warm and crowded, with no thought of swarming, but if honey is coming in rapidly at the time, it is worth something as a sign. A colony may swarm, however, without any previous hanging out. Perhaps the only management needed is to give the bees better ventilation, or to shade the hive, so the bees will be a little more comfortable. If anxious to have them swarm, let them alone.

2. The most reliable sign that bees meditate swarming, is the finding of a number of queen-cells in the hive. You may, however, judge a little from outside appearances, if

you find a colony ceasing work and loafing when other colonies keep on at work; and when bees return from the field laden with pollen and join the outside cluster without going inside to unload.

3. Extracting supers may be left on till the close of the harvest; section supers should be removed as soon as all, or nearly all, the sections are sealed. Otherwise the cappings will become darkened.

4. Between 9 and 2 o'clock. But swarms may issue almost any time in daylight if they're particularly anxious to make you trouble, especially after-swarms.

5. That depends upon what you want to do. They are not necessary unless you want to save cells that a free queen might destroy, or that the bees would destroy where they have a laying queen.

6. There is usually not much danger of a queen meeting a drone from the same hive, as she flies to a distance on her wedding-trip. To make sure against inbreeding, it is not a bad plan to introduce fresh blood by purchasing a new queen occasionally.

Heavy Colonies Lost in Wintering—Section Comb-Foundation With Drone-Size Base.

1. In this locality 99 percent of the bees that died were the strongest honey-gatherers of last season, and went into winter quarters heavy with stores. Can this be explained by the theory that they filled their brood-chamber too full late in the season, and were unable to rear sufficient young brood to withstand the severity of the past winter?

2. Don't you think it would be a good plan for the manufacturers of foundation to furnish the *section* foundation with drone-size base? It would save the bees considerable work in comb-building where full sheets are used.

INDIANA.

ANSWERS.—1. Yes, that would easily explain it. Not that it was so very late, either, but perhaps as early as August, for later than that it would not make so much difference.

2. You would probably not like it. Generally there is less drone-comb in the brood-chamber than the bees would have if left to their own devices, and with little or no drone-comb below and abundance above, the queen would be likely to make trouble above. To be sure, you might keep her down with an excluder, but that would be trouble and expense, and you would find that some sections would not be finished up as promptly as they should be, for the bees would hold the cells open for the queen. I think, however, that if you care to try it you can get drone-foundation.

Perhaps Pickled Brood.

I send by this mail a piece of honey-comb from a hive which has a disease of some kind. Please examine and report, with advice as to remedy, etc. WEST VIRGINIA.

ANSWER.—I'm not an expert in brood diseases, but I think there may be nothing more than pickled brood at the worst, and all trouble may soon disappear. If, however, it continues, it may be well to send a sample to one of the experts in such matters, as Dr. Howard, or Messrs. McEvoy or France. In the meantime you will do well to get Dr. Howard's pamphlet and inform yourself on the subject as fully as you can.

AMERICAN
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OLDEST BEE PAPER IN AMERICA
BEE JOURNAL
PUBLISHED WEEKLY BY
GEORGE W. YORK & COMPANY
334 Dearborn Street, Chicago, Ill.

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2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

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N. E. FRANCE, Platteville, Wis.

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A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.

OUR TOIL DOTH

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10c; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

FROM MANY FIELDS

Bees Working Well.

My bees are working finely. I have caught all that have swarmed. So far they have stored quite a lot of honey.

ROBERT DURLING.

St. Lawrence Co., N.Y., June 29.

Expects a Good Crop.

My bees are doing well. I had 3 colonies in the spring, and now have 7. We are having plenty of rain, and I think we will have a good honey crop this year. W. H. HOBERT.

Muscatine Co., Iowa, July 4.

Busy with Berries and Bees.

I have been very busy; our strawberries lasted 4 weeks. We picked 1,200 quarts the best week. The best day's run was $17.75. We sold every berry excepting what we ate and gave away; that is, we did not lose a box by spoiling. We sold lots on the 'phone. This is the fifth week and we will get 2 or 3 cases to-day.

In order to keep the bees quiet during strawberry time I wired old combs and made double deckers of 14 strongest colonies. Four days ago I set off the top deck, which had about 4 frames of brood and 4 of nice white honey. I gave the old colony some of those 1000 drawn combs in section-boxes and am extracting those 4 frames from each upper deck, and gave the 4 frames of brood a ripe queen-cell. The double-deck colonies seem to have passed the swarming fever, and they had 2 supers on top before I took off the top deck. They are now working finely in 3 supers (most of them.) I took off 2 supers of fine white sections, and have about

ITALIAN QUEENS!

Either Golden or Honey-Queens After July 1.

Our GOLDENS will come up with any other Golden strain. Our HONEY-QUEENS are what some breeders call "Red Clover Queens."

	1	6	12
Untested	$ .75	$ 4.00	$ 7.00
Tested	1.25	7.00	13.00
Breeders	5.00	....	....
2 frame Nuclei (no queen)	2.00	11.00	22.00

When Queens are wanted with Nuclei add price of any Queen wanted. We guarantee safe arrival of all Queens and Nuclei. Our Breeders may be returned after 30 days if satisfaction is not given. Cash must come with all orders. Orders are booked and filled in rotation.

Mr. Gus. Picaman, of Litchfield, Ill., in a letter of Aug. 3, 1903, says: "Send me two untested honey-queens. The one I bought of you two years ago is all right. There are no better."

Mr. Frank D. Gunderson, of Oconomowoc, Wis., says in a letter dated August 1, 1903: "I like your queens the best of any that I have ever had." This man placed an order last August for 24 Nuclei to be delivered this spring.

Address all orders to

D. J. BLOCHER, Pearl City, Ill.

☞ This ad. will appear every other number

16Etf Please mention the Bee Journal.

Additional Sleeping-Car Service.

The Nickel Plate Road has placed an additional vestibuled sleeping-car on train leaving Chicago at 9:15 p.m., daily, and also on train from Cleveland to Chicago, arriving Chicago 7:40 a.m., daily, for passengers between Chicago and Cleveland, in both directions, and intermediate points. Three daily trains. No excess fare. American Club Meals, ranging in price from 35c to $1.00, served in Nickel Plate dining-cars; also service a la carte, and mid-day luncheon, 50c. Chicago city ticket offices, 111 Adams St., and Auditorium Annex. 'Phones Central 2057 and Harrison 2208. Chicago depot, La Salle St. Station, cor. Van Buren and La Salle Sts. 16—28A3t

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We have arranged with several of the best queen-breeders to supply us with **The Very Best Untested Italian Queens** that they can possibly rear—well worth $1.00 each. We want every one of our present regular subscribers to have at least one of these Queens. And we propose to make it easy for you to get one or more of them.

In the first place, you must be a regular subscriber to the American Bee Journal, and your own subscription **must be paid in advance.** If it is not already paid up, you can send in the necessary amount to make it so when you order one of these fine Queens.

A Queen Free for Sending One New Subscriber

Send us $1.00 and the name and address of one NEW reader for the American Bee Journal, and we will mail you one of the Queens free as a premium.

Now, go out among your bee-keeping neighbors and friends and invite them to subscribe for the old American Bee Journal. If you want some to show as samples, we will mail you, for the asking, as many copies of the American Bee Journal as you can use.

Should there be no other bee-keepers near you, and you desire one of these fine Queens any way, send us $1.50 and we will credit your subscription for one year and also mail you a Queen. Of course, it is understood that the amount sent will pay your subscription at least one year in advance of the present time. So, if your subscription is in arrears, be sure to send enough more than the $1.50 to pay all that is past due.

As the supply of these splendid Queens is limited, we prefer to use all of them as premiums for getting new subscribers. But if any one wishes to purchase them aside from the Bee Journal subscription, the prices are as follows: One Queen, 75c.; 3 Queens, $2.10; 6 Queens for $4.00.

We expect to be able to fill orders by return mail, or almost as promptly as that, so there will be no great delay at any rate

Now for the new subscribers that you will send us—and then the Queens that we will send you!

We have often wondered **WHY** the old American Bee Journal does not **LEAD** in the number of regular subscribers instead of being second? It is **first** in age, and if we may believe many unsolicited testimonials, it stands first in value and helpfulness to its readers. Now, why not make it take the **first place** in the **number** of its regular readers? That's the question.

The next question is, How can it be done? Well, just like the bees of a colony store its surplus honey. One or two bees do not gather it all. Each working bee does a part. Thus, "many hands make light work"—and the job is soon done.

Now, suppose each present regular reader should say to himself, or to herself; "I'll get **one** new subscriber for the American Bee Journal in the month of July, and another one in August." One a month should not be a difficult matter. It may be that many can do better than that. Many have done so already. But suppose there should be gotten during July and August two new subscribers by each one who now reads the American Bee Journal, wouldn't that be a great thing? We believe it can be done.

You know the American Bee Journal, and can best tell to your bee-keeping friends and neighbors its real worth to any one who will read it carefully, and practice its teachings. We will send you all the free sample copies you can use wisely.

We offer valuable premiums for the work of getting **new** subscribers at **$1.00 each.** In addition to the Queens mentioned on this page, here are a few more premium offers:

More Premium Offers.

For 2 New Subscribers—Dr. Miller's Book—"Forty Years Among the Bees" (book alone, $1.00.)
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For 3 New Subscribers—the book, "A B C of Bee-Culture" (book alone, $1.20.)
For 1 New Subscriber and 10c—Hutchinson's "Advanced Bee-Culture" (book alone, 50c.)
For 3 New Subscribers—Novelty Pocket Knife with your name and address on one side of handle, and Queen, Drone and Worker-Bee on other side (knife alone, $1.25.)

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Now, we hope that all who can possibly do so will see what they can do in the line of getting **NEW** subscribers for the American Bee Journal. You will likely surprise yourself at the way you will be able to get them. And it will also pay you well, as you will get the valuable premiums we offer to you. We would like to receive **at least two new yearly subscribers from each reader during July and August.** We will be glad to be kept busy at our desk during the hot weather. We never felt better than we do now, so can stand a grand rush of new subscribers. Just let them come!

Now, for a big pull, and a pull all together! How many will be first to send in new subscriptions?

Address all orders to, Yours fraternally,

GEORGE W. YORK & CO., 334 Dearborn St., CHICAGO, ILL.

15 or 20 supers soon to come off, besides about 300 pounds of extracted. I have 77 supers on, and will put more on to-day.

We had a backward spring, but I made every effort to get the bees strong and had over one-half in 3 supers. Basswood promises the finest bloom I ever saw, and will be in in about 8 or 10 days. I am fixed for it. I have 50 empty hives, regular Root hives, excepting I "rooted" them out myself. Also 8,000 sections which I got for $2.50 per 1,000.

I have had some swarming, but not much. I have 50 colonies now; 34 in the spring.
J. E. Johnson.
Knox Co., Ill.

Bees Doing Passably Well.

The season has been cold and backward, but the bees are doing passably well at present. I am caring for 140 colonies. There are no less than 1,500 colonies of bees within a radius of 5 miles of this place.

The American Bee Journal is a welcome guest at our house.
C. F. Hoadley.
Finney Co., Kan., July 2.

Long Winter Confinement of Bees.

I notice in June 16th number several references to continuous long confinement of bees during the winter.

In the fall of 1880, at my old home in northern Iowa, I put away 115 colonies in chaff-hives. These were confined to their hives during the winter, without a single flight, for 151 days. Six of these colonies died during the winter and 109 survived, all of them practically free from disease, and all survived through the season. I don't think I ever had bees come out of winter quarters in stronger and better con-

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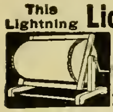

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Please mention Bee Journal when writing.

Italian Bees For Sale.

1 colony in good frame hive	$5.00
1 strong 1-frame Nucleus	1.00
1 " 2-frame " (with tested queen)	2.50
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1 Tested Queen	1.00

☞ My crop last season was about 40,000 pounds of honey (nearly half comb) from 210 colonies, spring count, and increased to 280 colonies, which shows my bees are hustlers.
N. STAININGER, TIPTON, IOWA.
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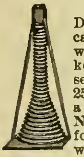

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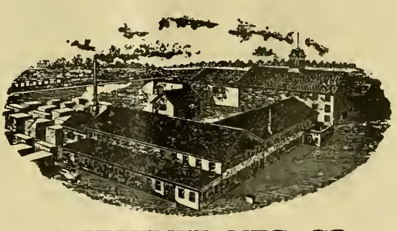

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Select Untested	1.00	5.00	9.00
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Two-frame Nucleus and nice Queen 3.00

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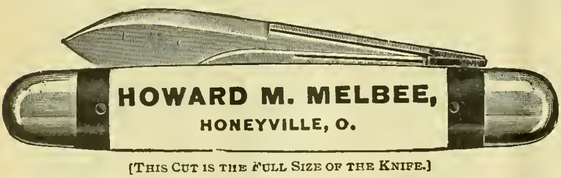
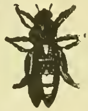
The Novelty Pocket-Knife.

Your Name and Address on one side—Three Bees on the other side.





[THIS CUT IS THE FULL SIZE OF THE KNIFE.]

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last-time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00.) We will club the Novelty Knife and the Bee Journal for one year, both for $2.00.

GEORGE W. YORK & CO. Chicago. Ill

☞Please allow about two weeks for your knife order to be filled.

dition than did the 109 colonies. I obtained an average yield during the season of 1881, of 130 pounds per colony—next to the largest yield I ever obtained in that locality.

The condition which helped to this success in spite of such long confinement, was having the colonies in good condition in the fall, with ample stores of the best of fall honey (mostly buckwheat), early packing, use of first-class packing material, utilized in the best manner then known, a good windbreak on all sides of the apiary, and last, but not least, I think, the having the hives almost (many of them entirely) covered by snow during all the hardest part of the winter. The hives used were permanent chaff-hives, somewhat on the order of the Root chaff-hive, excepting that the brood-chamber was the same size and dimensions as the Ideal hive still used in the apiaries.

Mr. Doolittle says that he does not think it possible that bees can be confined as long as 156 days when wintered on the summer stands, and come out in perfect shape for the summer's work. It looks as if that opinion needs revision. O. O. POPPLETON.

Dade Co., Fla., June 27.

A Discouraging Season.

At this writing the stores of the bees throughout the county, as far as has come under my observation, have gone backward from what they were one month ago. As the weather was not unusual for this time of the year, I cannot account for this backward tendency in any other way than that the reaction after swarming-time is the cause of it; that the bees are busy getting up normal strength, and that they will yet compensate for the time and money spent on them. SEBASTIAN ISELIN.

San Joaquin Co., Calif., June 26.

Poor Year in Florida.

This has been a poor year for bees all along the coast. Here they are not as heavy as on April 1. The saw-palmetto yielded no honey; neither has the mangrove. Cabbage-palmetto may give them enough to winter on, but there will be no surplus.

E. M. GRAVES.

Volusia Co., Fla., June 30.

Fine Prospects for a Crop.

If the weather is favorable for the gathering of it, the prospects are fine for a good honey crop in this section of the country. We never had a better

VIRGINIA QUEENS.

Italian Queens secured by a cross and years of careful selection from Red Clover Queens and Superior Stock obtained of W. Z. Hutchinson. I can furnish large, vigorous Untested Queens at 75 cents; after June 15, 60c. Tested Queens, $1.00; after June 15, 75c. Write for discount on large orders.

CHAS. KOEPPEN,
22Atf FREDERICKSBURG, VA.

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to order your
Bee-Supplies & Winter-Cases
NOW, while we can serve you PROMPTLY, and get them at BOTTOM PRICES.
R. H. SCHMIDT CO., Sheboygan, Wis.
27A26t Please mention the Bee Journal

white clover bloom, and raspberries and basswood are promising a full bloom also.

The winter loss of bees here was generally heavy, some losing all they had. I lost 8 colonies out of 39, but they were light in bees; but as the spring has been favorable for their building up, they have become quite strong. The bees have a strong inclination to swarm here this spring, which is not favorable for the gathering of a large crop of honey per colony.

GEO. E. MOORE.

Marathon Co., Wis., June 30.

Shaken Swarms Without Shaking.

Replying to H. Vanderwerp, page 459: I am using the plan as described on page 411 this summer, and have no difficulty about ventilation. Listening at the side of the hive I hear no unusual commotion, so I imagine the field-bees soon begin to go through the escape, the anxious ones first, and those left are quiet in the presence of the queen and brood. I have used the plan for two seasons now, and so far it has worked well. TURNER BUSWELL.

Somerset Co., Maine, July 4.

Formalin for Disinfecting Extracted Honey.

Will Mr. France, who has tested the formalin gas treatment for foul brood, tell us through the columns of the American Bee Journal whether it can be used to disinfect extracted honey? If so, how do you proceed?

The great problem that confronts the bee-keepers of southern California just now is how to beep their bees from starving for the next 6 or 8 months, and at present market prices extracted honey is cheaper feed than sugar, but many are afraid to feed honey bought in the general market owing to the danger of introducing the disease that has caused so much trouble.

If the gas treatment is not available, what is a guarantee against contagion in this way? J. B. WHITAKER.

San Diego Co., Calif., June 23.

We referred the foregoing to Mr. France, who answers as follows:

I doubt if formalin is able to kill germs of disease in honey. We have to extract very closely infected combs before using. If I bought honey to feed bees, to be safe I would bring the honey to a boil, and stir well, the can of honey being set in larger can of boiling water. If at the boiling point, and well stirred, it will kill all life, and not color the honey much.

Never set honey in a dish on the stove, but in an outer one of boiling water. N. E. FRANCE.

The Demand for

Moore's Strain of Italians

becomes greater each year. The following report shows the reason why:

EXCEL IN STORING CAPACITY.

B. S. Taylor, a large honey-producer of Perris, Cal., who sent me an order for 75 queens at one time, says:

"I have a large apiary mostly of your stock, and I have never, in my 30 years' experience, seen so quiet and gentle bees to handle, and in storing capacity they excel anything I have ever had."

Untested Queens, 75c each: six, $4.00; dozen, $7.50. Select Untested, $1.00 each; six, $5.00; dozen, $9.00.

Safe arrival and satisfaction guaranteed. Descriptive circular free.

I am now filling orders by return mail, and shall probably be able to do so till the close of the season.

J. P. MOORE,
27Atf MORGAN, PENDLETON CO., KY.
Please mention Bee Journal when writing

TENNESSEE QUEENS

Daughters of Select Imported Italian, Select Long-Tongue (Moore's), and Select Golden, bred 3¼ miles apart, and mated to Select Drones. No impure bees within 3 miles, and but few within 5 miles. No disease; 31 years' experience. All mismated queens replaced free. Safe arrival guaranteed.

	Price before July 1st. 1	6	12	After July 1st. 1	6	12
Untested	$ .75	$4.00	$7.50	$ .60	$3.25	$ 6.00
Select	1.00	5.00	9.00	.75	4.25	8.00
Tested	1.50	8 00	15.00	1.25	6.50	12.00
Select Tested	2.00	10.00	18.00	1 50	8 00	15.00
Select Breeders					$3.00 each	

Send for Circular.
JOHN M. DAVIS, Spring Hill, Tenn.
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—and are ready to do business. Write us for leaflet showing our special Hives and prices. It is the greatest bargain you ever saw.

Mondeng Mfg. Company,
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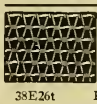

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AUG. LOTZ & SON,
24A17t CADOTT, WIS.

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LICE SAP LIFE

That's how they live and thrive. You can't have healthy, profitable fowls or stock and have lice too. Let

Lambert's Death to Lice

take care of the vermin and you will be more busy taking care of the profits. Makes sitting hens comfortable. Sample 10 cents; 100 oz., $1.00 by express. "Pocket Book Pointers" free.

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That covers the whole Apicultural Field more completely than any other published,
Send $1.20 to

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"Bee-Keeper's Guide."
Liberal Discounts to the Trade.

Honey AND Beeswax
SOLD BOUGHT

When you run short of Honey to supply your local trade, write to us for prices. We offer it in 60-pound tin cans, 2 cans in a box Purity guaranteed. We pay cash for pure Beeswax. Price quoted on application. Address,

THE YORK HONEY CO.
HENRY M. ARND Mgr
101 E. Kinzie Street, CHICAGO, ILL.

BINGHAM'S PATENT Smokers
25 years the best.
Send for Circular.
25Atf T. F. BINGHAM, Farwell, Mich.

Poor Prospects for Honey.

I lost 21 colonies out of 26 in March. There is no honey here yet, and the prospects are very poor—too dry. But I hope we will get some honey later.

JOHN T. PAINTIN.

Johnson Co., Iowa, June 28.

No Crop Prospects.

The prospects for a honey-crop—there are none. The bees in this locality are making a living, and that is about all. Last fall I had 80 colonies, and when I inspected them this spring I found I had lost only 4 colonies, one more was queenless, and one queen a drone-layer. All had plenty of stores and were in good condition.

I am a deputy county inspector, have so far inspected 735 colonies, and have found only 7 colonies with foul brood. We are fighting it hard here.

E. W. LEE.

Riverside Co., Calif., June 24.

Golden Italian and Brown Bees.

I don't often write anything for the "Old Reliable"—the best and greatest of all the bee-papers—simply because I am not able to advise, from lack of knowledge and experience, therefore when a fellow can't say any sensible thing that would be of some advantage to somebody, it is best to say nothing; but this time I will write a short article for two reasons, to-wit:

1st. To reply to "California," on page 458

2d. To learn something, if some of our kind apiarists will reply to my letter on the subject named herein.

"California." on page 458, says, "The golden Italians have never been known to go into a super in this place," etc. That is precisely my experience. Last August or September I sent off and got some golden Italians, and some long-tongued, yellow, clover queens. I bought of reliable breeders, and I believe they thought they were giving me the very best they had; but the golden Italians have proven a perfect failure. They have not filled a single super frame, and if I had not added some of my native brown bees to them to strengthen them at the beginning of the honey-flow, they would not have entered the supers at all. Now, what causes it? Most of the brown bees have died of old age, leaving only the golden Italians. In opening the super I find only the latter roaming about over the combs in a lazy, listless sort of a way, with no seeming energy.

The yellow, clover bees, which, by the way, look to me like hybrids, judging from their color, have done much better, only one colony of them having swarmed this season, and have filled the third, and are now on the fourth super, that is, those that did not swarm. Those that swarmed have not quite filled one super. The golden

Italians are as complete a failure as I ever expect to see. On examination of their brood-combs I find more drone-brood than worker—all scattered over the combs. They don't hustle in the early morning hours like my native browns. Then, I have some Carniolans that I can't complain of. They love to swarm, it is true, but they are not behind in storing at the same time. My native brown bees have filled the fourth super this season, and their storing commenced about May 1, as during all of April it was so cold, and having an east wind that lasted all of April.

My entire apiary came very near starving in April; but fortunately they had stored sufficient during latter part of February and parts of March to tide them over the dearth of April. So we, here, can only count our present crop since the first of May.

The native brown bees surpass all others I have ever tried, in every way. They build the whitest comb, the straightest combs, and do it more quickly than any other race of bees. Although the Carniolans build straight combs, and whiter than some, they don't come up to the browns.

Now, then, this is what I have to say, and I will now ask the fraternity if any one or more of them will be kind enough to reply to this, whether my experience with golden Italian and others I have named is their experience.

Another thing I would ask: Are all golden Italians as small as mine? I always thought Italian bees were larger than the native bees of this country, but I find they are much smaller than our natives. The Carniolans are even smaller than the natives. The native black bees, noted for their cross nature, but are industrious, have become almost extinct in this country, the brown bees becoming the natives. JOHN KENNEDY.

Adams Co., Miss., July 2.

Take Notice That the New Century Queen-Rearing Co. will have 1000 Queens ready for the mail by April 20. Tested, $1.00; Untested, 75c; 5 for $3 25; 10 for $6.00. Prices on larger quantities and Nuclei given on application. "Prompt service; fair treatment" is our motto.

Address,

John W. Pharr, Prop., Berclair, Tex.

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WE SELL ROOT'S GOODS IN MICHIGAN

Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Beeswax Wanted for Cash.

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BELL BRANCH, WAYNE CO., MICH.

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Special Notice to Bee-Keepers

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Money in Bees for you.
Catalog price on

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Up First Flight.

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ITALIAN QUEENS, BEES AND NUCLEI.

Choice home-bred and Select Imported Stock. All Queens reared in full colonies.

One Untested Queen.....$. 65
" Tested Queen....... .90
" Selected " 1.10
" Breeder " 1.65
" Comb Nucleus (no Queen)............ 1.00

All grades ready now. Safe arrival guaranteed.

For prices on quantities and description of each grade of Queens, send for free Price-List.

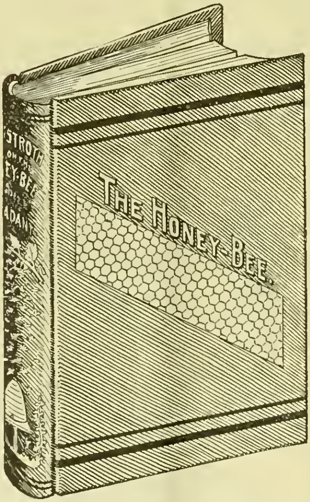
J. L. STRONG,
204 East Logan Street, CLARINDA, IOWA.

Please mention Bee Journal when writing

Langstroth on... The Honey-Bee

Revised by Dadant—Latest Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son.



Each subject is clearly and thoroly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

The book we mail for $1.20, or club it with the American Bee Journal for one year—both for $2.00; or, we will mail it as a premium for sending us THREE NEW subscribers to the Bee Journal for one year, with $3.00.

This is a splendid chance to get a grand bee-book for a very little money or work.

GEORGE W. YORK & CO.
334 Dearborn Street, CHICAGO, ILL.

Beedom Boiled Down

ROCK-A-BY BABY.

BY EUGENE SECOR.

Rock-a-by baby
On mother's warm breast,
Cuddled as closely
As birds in their nest.
Sleep and dream, sweet one—
But O, do not cry!
Tears are for older ones—
Rock-a-by, baby by.

Smiles are the angels
Of our better selves,
And babies are lent us—
The dear little elves—
To light up the windows
Of hearts—O, don't cry—
Smiles are God's angels—
Rock-a-by, baby by.

Once I was sleeping
On mother's soft arm,
Once I was sheltered
By her from all harm.
Now she is slumb'ring
Where none ever sigh,
While I remain, crooning,
"Rock-a-by, baby by."
—Children's Home Herald.

[While the foregoing is not exactly about bees, still it will touch the hearts in a good many homes of bee-keepers. It will be noticed that Mr. Eugene Secor wrote it—often called the "Poet-Laureate of Bee-Keeping."—
—EDITOR.]

On Thoroughness, Perseverance and Specialty.

I am sorry that such a large percent of the people who keep bees do not realize the necessity of being thorough in everything connected with the business. Far too many of them are looking for "some other business to go with it," not knowing that hardly one man in a thousand is smart enough to be cut in two, and two men made of him. I have always known that *I* never was; therefore, I have given my bees my whole attention, as a business, for nearly 50 years.

The chances to succeed in bee-keeping are, I think, better now than I have ever known them to be; but, like all other lines of business, you must be thorough in all the details. The time is past when the lazy, careless, shiftless man can compete with the man who puts lots of hard work, energy, and perseverance into his business.

In conclusion, I will say, either attend to your bees as they should be, or else sell them to some one who will, and then turn your attention to something else.—E. W. ALEXANDER, in Bee-Keepers' Review.

A Nailing Table.

I used to get down on the floor when nailing up hives and wear out my knees and back, straddle around like a spider, and sometimes entertain some other worldly thoughts; the hammer, the nails, the square and everything needed seeming to have a fashion of getting out of reach just when needed.

An ordinary table is too tall and not strong enough for nailing on; so about two months ago I made what I call a nailing-table. This table is made of three-inch yellow pine, the top of two pieces 3x12 inches by about 3½ feet long. The legs are made of the same material of suitable length, and reach clear across near each end. It is well nailed together and thoroughly braced, and the top is planed so as to make it as nearly level as possible. The way I decided on the proper heighth was by taking a nail in the left hand and holding it against the wall or some upright object at just the right heighth to receive a downward blow with the hammer while I was standing in an upright position. The table was then made so that its top would be just sixteen inches lower than this point, as I use 10-frame hives.

See that the table stands solid on the floor; stand at one corner so that the table is to your right and in front of you. Near the opposite end bore a ¾ or 1 inch hole, and in this fit a shouldered piece of about 1x3, so that the top of it is 14¼ inches above the table top. Rest the one end of the side of the hive-body on top of this support, and fit the other end to the end-piece. Now you want a piece of hard wood 1½x3x10 inches long. Lay this over the dovetailed parts, and with a heavy wooden mallet (made for the purpose) strike a solid blow on top of it, driving the dovetails (so-called) together. Next put in the other end, and last the other side. You have likely noticed that in driving dovetailed hives together, when one corner is struck the other corner has a tendency to come apart. Therefore, when I have all four pieces loosely fitted together I slide the hard-wood piece from one end to the other, striking the two upper corners alternately. When the corners are well fitted together apply the steel square which should be lying on the table near your right hand, with the tongue hanging down over the end of the table. After trying it for square you are ready for nailing.

The 7d cement coated thin wire nails should be in a pan or some wide receptable (not in a paper bag) near, and convenient to your left hand so that you can grasp six or eight without stooping or moving out of your tracks. Now set a nail near the corner of the hive to your right, start it with one or two light taps and send it home with two heavy blows of a hammer that is just the right weight. Do not peck away on it with eight or ten light strokes. While your right hand is wielding the hammer have your left hand and fingers bringing the next nail in position. Follow the nails with the hammer, that is, work from right to left, unless you are left-handed, in which case the whole operation should be reversed. The hive-stuff and everything needed should be within easy reach so that the operator need not move from his position.

For nailing frames and other small parts I have a seat of suitable heighth, and sit beside the table instead of standing. I have devoted considerable space to this one subject, but I fully believe it will be worth much to the readers if they will follow the advice here given.—S. E. Miller, in Progressive Bee-Keeper.

Uncapping Honey—How to Treat the Honey-Knife.

A large share of the work of producing extracted honey is that of uncapping the combs. Some day we may have an uncapping machine, but at present we must depend upon the knife. The Bingham is really the only uncapping-knife worth considering. First, it must be kept sharp. Next, it must be kept free from honey and wax. This can be accomplished by having two or three knives, standing them in water when not in use. As soon as a knife becomes daubed up and sticky with honey and wax, drop it into a dish of water and pick up a clean knife. The water soon dissolves off the honey leaving the knife clean and ready for business. Whether the knife shall be kept in hot water, or whether the water shall be cold, depends upon circumstances. If the extracting is done in hot weather, and the combs uncapped as soon as taken from the hives, while the honey is warm, fresh and comparatively thin, a cold knife is preferable; but if the extracting is not done until the season is over, when the honey and combs are stiffer from ripeness and lower temperature, then the hot knife is more desirable.—Bee-Keepers' Review.

ANOTHER
CAR-LOAD
of Hives, Sections, and Supplies of all kinds just arrived from G. B. Lewis' Factory, and are ready to fill orders quick. Send us your orders for everything. We have it.
Louis Hanssen's Sons
DAVENPORT, IOWA.
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10 CENTS A YEAR.
The Dixie Home
MAGAZINE, largest, brightest and finest ILLUSTRATED MAGAZINE in the world for 10c a year, to introduce it ONLY.
It is bright and up-to-date. Tells all about Southern Home Life. It is full of fine engravings of grand scenery, buildings and famous people. Send at once. 10c a year, postpaid, anywhere in the U.S., Canada and Mexico. Six years, 50c. Or, clubs of 6 names, 50c; 12 for $1. Send us a club. Money back if not delighted. Stamps taken. Cut this out. Send to-day. THE DIXIE HOME,
24A48t No. 75, Birmingham, Alabama.

Success dependent upon many things.

Successful men are often asked why they have succeeded—to give the secret of their success. It can't be given in a few words; in short, there is no "secret of success;" it is the result of many things. I was in a dentist's chair the other day when a farmer came in to talk with the dentist about furnishing him with butter. The dentist fell to talking with the farmer, trying to find out why his butter was superior. Was it because of what he fed the cows, was it because he didn't keep the cream until it was too old, or was it because he churned it at a certain temperature, or was it this or was it that? The farmer replied that butter might be poor because some of the points mentioned were neglected, and it might be one, or more, of a great many other things. The dentist replied, "I see; it is something like this: If a filling drops out of a tooth before the patient gets down stairs, there is always a reason for it, but it may be one of a thousand things."

Then, as is often the case, I fell to moralizing, or philosophizing. Success does not come from a single idea, but from careful attention to many things. The secret of a bee-keeper's success is not in location alone, nor in the kind of stock that he has, nor of the methods of manipulation. It comes from the proper combination of many things; and the neglect of one factor may destroy the effectiveness of others most excellent in themselves.—Bee-Keepers' Review.

Some Apiary Stock at a Bargain!

We offer for sale, from our stock of bee-supplies, the following list, some of which is new and the balance as good as new:

20 Wood-bound 10-frame Zinc Honey-Boards	15c each.
1080 New, Clean, Wired Extracting Combs (L. size)	15c each.
420 New L. Brood-Frames with full sheets wired foundation	10c each.
400 Good L. Brood-Combs	12c each.
1 "New Model" Solar Wax-Extractor (glass 26x60 in.)	8.00.
1 Wooden Honey-Tank with galvanized iron bottom (holds 1800 lbs.)	10.00.
1 6-inch Comb Foundation Mill	15.00.
1 10-inch Comb Foundation Mill	25.00.
100 New L. 10 fr. Dovetailed Hives (each consisting of a Body, Cover and Bottom-Board—all nailed)	95c each.

If you order Combs and Hives, the Combs can be put right into the hives and shipped in that way. All the above can be shipped promptly, so long as they last. First come, first served. What do YOU want out of the lot? or do you want it all? (No order filled for less than $5.00 from the above list.) Also BEES AND QUEENS, and Stanley Queen Incubator. Send for free Circular
Address, ARTHUR STANLEY DIXON, ILL.

HONEY AND BEESWAX

MARKET QUOTATIONS

Chicago, July 7.—There is a plentiful supply of honey of all kinds on the market with no sales being made; prices therefore cannot be more than on an asking basis. Very little if any choice to fancy comb, but a large amount of what would average No. 1 is offered at 10@12c; no sale for off grades or damaged lots. Extracted, white, 6@7c; ambers, 5@6c. Beeswax, 28@30c. R. A. Burnett & Co.

Cincinnati, O., July 7.—The sales of comb honey, which are made now, amount but to very little. Some fancy comb left from last season finds sales for 12½@13½c. The new is just beginning to be offered and small lots are coming in. Extracted for manufacturing purposes finds a fair demand. I quote amber in barrels from 5¼@5½c; in cans, ½c more; water-white alfalfa, 6½c; extra fancy white clover, 7½c. Beeswax, 28c. C. H. W. Weber.

Albany, N. Y., June 3.—The honey market is very dull now, and prices nominal Receipts are very light and demand the same. We quote comb honey, in good order, white, 13@15c; mixed, 12@13c; dark, 10@12c. Extracted, buckwheat, 5½@6c; mixed, 5½@6c; white, 6½@7c. Beeswax, 30@32c. H. R. Wright.

Cincinnati, June 15.—The demand for honey is slow for this season of the year, which is due to the vast quantities that were held over from last season, and the importation of Cuban honey. We quote amber in barrels and cans at 5¼@6½c; white clover, 6½@8c. Beeswax, 30c.
The Fred W. Muth Co.

Boston, May 14.—The demand for honey is extremely light, almost nothing, and supplies are heavy for this time of the year, and our prices therefore are largely nominal. We quote fancy white at 15@16c; A No. 1, 14@15c, and No. 1, 14c, with no call for under grades. Extracted, from 6@7c. Blaee, Scott & Lee.

Kansas City, June 25.—The market is about cleaned up on old honey, and there is very little demand at present. There are a few cases of new honey coming, which are being offered at $3.00 per case. No. 1 stock and amber at a little less. There is a great deal of old extracted on the market which is very slow sale.

Beeswax in good demand at 30c.
C. C. Clemons & Co.

New York, June 21.—Very little demand for comb honey. Some trade for No. 1 and fancy white, at from 12@13c, while dark and amber are almost unsalable. Extracted is in fair demand, although prices are irregular. We quote from 5@6½c, according to quality. Southern in barrels, at from 50@55c per gallon.

Beeswax more plentiful and prices are gradually declining. We quote 28@29c.
Bildreth & Segeleen.

Philadelphia, June 29.—It is just between seasons now with comb honey. No sales reported and nothing doing. Our commission markets are at the height of the berry season, and there are few sales made in extracted honey for manufacturing purposes. We quote: Fancy white extracted, 7c; amber, 6c. Beeswax is declining; 28c for best yellow.

We are producers of honey and do not handle on commission. Wm. A. Selser.

San Francisco, June 29.—White comb, 1-lb. sections, 12½@13c; amber, 9@11c. Extracted, white, 5½@6c; light amber, 5@5¼c; amber, 3¾@4¼c; dark amber, 3¼@3¾c. Beeswax, good to choice, light, 28@30c; dark, 26@27½c.

Not much honey of any sort on the local market, and especially are stocks light of choice to select white. At the same time there is no active inquiry at full current figures. To sell freely, especially for shipments abroad, inside quotations would be about the utmost that could be depended on.

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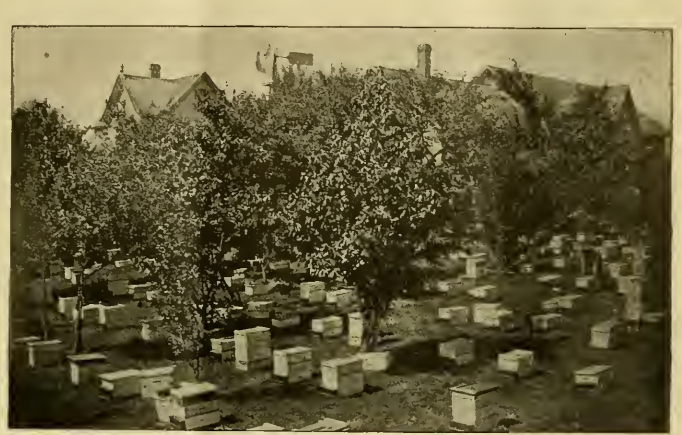
AMERICAN BEE JOURNAL

44th Year. CHICAGO, ILL., JULY 21, 1904. No. 29.

T. F. BINGHAM.



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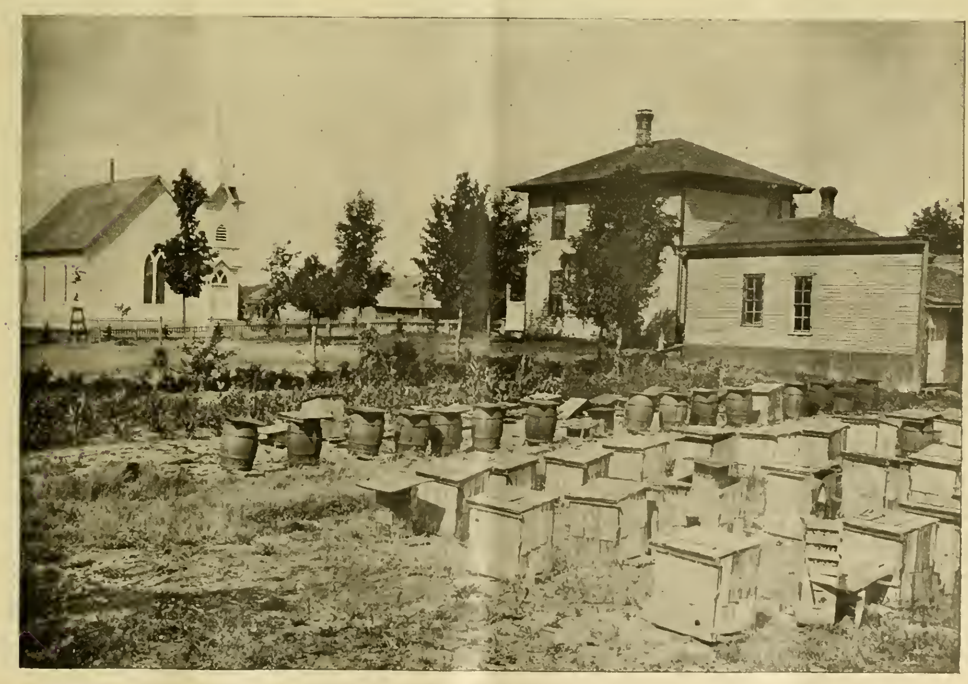

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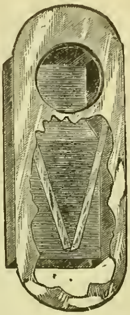

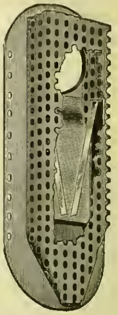

Spring Escapes.—For clearing the super of bees before taking off the sections. A great labor-saver. No shaking of heavy supers and excessive smoking. No stinging and robbing. Just tip up the super and insert the board. Next morning the super is free from bees and can be removed. We have tested all forms of escapes and find the Porter by far the best.

Price, 20c each; $2.25 per doz., prepaid. Price, with board, 35c; $3.20 for 10, not postpaid.

House Escapes.—No extracting-house is complete without these escapes. They allow the bees to pass out and it is impossible to return. See that your windows and doors are fitted with them and you won't be worried with robbers. This escape is used to place on top of a pile of supers when such a method is used in clearing supers.

Price, 25c each; $2.75 per doz., postpaid.

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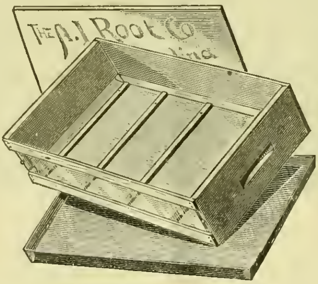
Don't allow your honey to be sold at low prices on account of poor shipping-cases. Put your crop in Root's No-Drip Cases and it will reach the market in perfect condition, thus bringing satisfactory returns. The cases are made of selected basswood with 2 or 3 inch glass front which show off the honey to the very best advantage.



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		1	10	100
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12-in. 2-row "	20	15	1 30	11 00
10-in. 2-row "	20	15	1 20	10 50
16-in. 2-row "	25	18	1 50	12 00
8-in. 3-row "	20	15	1 30	11 50
6¼-in. 3-row "	20	15	1 20	11 00
7⅛-in. 4-row for 4x5	30	22	1 80	16 00
7⅛-in. 3-row "	25	20	1 40	12 00
9¼-in. 4-row for 3⅝x5	30	22	1 80	16 00
6¼-in. 3-row "	25	20	1 40	11 50

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GEORGE W. YORK, Editor. CHICAGO, ILL., JULY 21, 1904. Vol. XLIV—No. 29.

Editorial Comments

The National Convention at St. Louis.

The next meeting of the National Bee-Keepers' Association promises to be a very important gathering. Each annual convention is such. But the St. Louis one is to be exceptional. You should be there. It is to be Sept. 27, 28, and 29. Just the best time of all the fall season. Secretary Brodbeck is preparing a great program. Big subjects.

Better get ready to go. You'll miss it if you are not there. Go, and take your wife or sweetheart. It will be a sweet time all around.

Preparation for Swarming.

Years ago it was understood as a rule without exceptions that a prime swarm would not issue until sufficient time had elapsed from the first starting of queen-cells for one or more of them to be sealed. Since movable combs came into use it has come to be regarded as a rule with many exceptions. Is it really true that there is ever an exception? To be sure, a swarm often issues with no sealed cell present, perhaps only eggs in queen-cells, but does that ever occur when the bees are left to themselves? If queen-cells are destroyed by the bee-keeper, the bees may then swarm with only eggs in queen-cells, or possibly without even as much preparation as that; but is there ever really a case in which the bees swarm inside of eight days after the first egg is laid in a queen-cell?

Destroying Queen-Cells to Prevent Swarming.

It is the common thing for the beginner, when told that the prime swarm issues when the first queen-cell is sealed, to settle down at once to the pleasing conclusion that if he can only prevent the sealing of queen-cells he has the key to the situation, and all he has to do is to destroy all queen-cells once a week and there will be no swarming. But when the bees are thus thwarted, he finds to his sorrow that in too many cases they are only made the more determined, and he may find a swarm issuing the very day after he has destroyed all queen-cells. From this some have concluded that the destroying of cells has no bearing whatever upon swarming. That is too sweeping a conclusion. In a good many cases swarming will be delayed if queen-cells are emptied, especially if containing only eggs, and sometimes the bees will give up swarming for the season. But destruction of cells is generally not to be depended upon as a means for prevention of swarming.

Grading and Casing Comb Honey.

Many a bee-keeper, who otherwise manages well to secure a good crop of honey, when it comes to grading and casing it for market makes a bad mess of it.

Some are so careless, and so heedless, as to mix in the same case the very finest white comb honey with amber, partly sealed, or even unsealed.

Partly sealed and unsealed honey should never be marketed, at least not sent to the city market. Such may, perhaps, be sold around home, but it would be better to use it in the bee-keeper's own family.

Again, we have seen section honey that was simply taken from the hives in the super, and the super and all sent off to market! Isn't that awful? Such gross carelessness or ignorance is truly inexcusable. Of course, no reader of modern bee-literature would be guilty of such work.

In order that comb honey shall bring the best price in the market it should be graded, and then each grade packed separately in nice, new no-drip shipping-cases.

Slipshod work pays no better in bee-keeping than anywhere else.

Exceptions in Swarming.

A correspondent who reports an after-swarm as issuing earlier than he expected, writes:

"On page 435 it tells how to prevent after-swarms, but as I have had several come out within two or three days after a prime swarm as mentioned above, would it not be a good idea to add the words, *but if a swarm comes out and returns, reckon one week from that day*. You see, we "greenhorns" take the experts at just what they say. Picture me with Dr. Miller's, Prof. Cook's, and the "A B C of Bee-Culture" books trying to figure out why that after-swarm came out ahead of time!"

It would be a nice thing if one could always give instructions that are complete, and rules that are without exceptions. But if one should always give all the variations that can be studied up by a freakish colony of bees, and tack on corollaries accordingly to any general rule, one would shrink from offering any rule. The best that can generally be done is to give the rule, and trust that the learner will have studied general principles sufficiently in his text-book to meet the various exceptions that may arise.

In the case under consideration, if the addition suggested were made to the rule, it would by no means fit all cases.

The rule given on page 435 meets a normal case of swarming, and if the suggested additon were made to the rule, it would by no means meet all cases. If stress of weather should prevent the issuing of a prime swarm at the usual time, that would shorten by a day or more the space of time between the first and second swarm, and a second swarm might issue in a week or less. Some casualty might happen to the queen—she might be unable to fly, and issuing with a swarm might be lost, the swarm returning to the hive. Then a swarm would issue as soon as the first emerging young queen was ready to go with it, and if the bee-keeper should have failed to see the previous abortive attempt at swarming, he would be surprised to see what he called a second swarm issuing within a day or two after the first.

The Germans are wise to insist that the important thing is to learn theory as a groundwork for practice.

Appreciated Appreciation.

In the last American Bee-Keeper appears an article headed, "Let the Honey Get Ripe," with the following appreciative words of introduction:

> "The agricultural press, in general, usually makes a mess of anything attempted in the line of apiarian discussions, but the following, from the Florida Farmer and Fruit Grower, is a rare exception to this rule, and the comment and suggestions are so excellent that we have pleasure in reprinting it in the American Bee-Keeper."

Then follows in full the editorial, "Extracting and Marketing Unripe Honey," to be found on page 131 of the American Bee Journal for Feb. 25, 1904. It is gratifying to know that the article is so fully appreciated, and the Florida Farmer and Fruit Grower shows excellent taste in making its selections, but it would be still more gratifying if the Florida Farmer and Fruit Grower would imitate the courtesy of the American Bee-Keeper by giving full credit to the source from which its selections are made.

Treatment of After-Swarms.

In general it is best to prevent after-swarms, and the plan given on page 435 will usually prove successful. But "accidents will happen in the best of families," and it is well that the novice should know how to proceed if an after-swarm issues.

The old rule was to return to the parent colony an after-swarm as often as it issued, and except for the labor involved in returning a number of times the rule was good. The philosophy of the plan is this:

When a prime swarm issues, a number of queen-cells are in the hive, and in a week or more the virgins in these cells are ready to issue. If further swarming is contemplated, only one virgin is allowed to emerge, the others being guarded in their cells by the workers. A second swarm issues with the free queen, and it may be that only one of the remaining virgins will be allowed to emerge, which virgin will accompany a third swarm, and this may continue until four or more swarms have issued. Generally, however, the colony is so weakened by the issuing of the second swarm that all virgins are allowed to emerge, a royal battle occurs, and only one aspirant for royal honors is left. If the second swarm be at once returned, the virgins may be kept in, and it may be necessary to return the swarm several times. To avoid this, hive the first after-swarm that issues, and leave it standing in the shade for 24 hours. Then shake the bees down in front of the mother colony, letting the bees run in. The mother colony, during that 24 hours, will have allowed all virgins to emerge from their cells, and there will be no more swarming.

"**The Hum of the Bees** in the Apple-Tree Bloom" is the name of the finest bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us *one new* yearly subscription to the American Bee Journal at $1.00.

Miscellaneous Items

Jas. A. Green, bee-inspector for Mesa Co., Colo., wrote wrote us July 8:

> "The honey-flow so far this season has been very light; very few swarms and very little honey. Causes: Cool weather and overstocking."

* * *

General Manager N. E. France, of Grant Co., Wis., writing us July 7, reported that there was not much show for a honey harvest in southern Wisconsin, but that there is an abundance of alsike in central Wisconsin, with a fair harvest prospect.

* * *

Hon. E. Whitcomb, of Saline Co., Nebr., one of the board of directors of the National Bee-Keepers' Association, has an article on "Nebraska Honey-Bees," in The Saturday Summary, published at Beatrice, Nebr. Mr. Whitcomb is entertaining both as a speaker and as a writer, either on bees or on any other subject that he takes up.

* * *

Prof. Geo. E. Thompson, for many years editor of the publications of the Government Bureau of Animal Industry, Washington, D. C., is a candidate for the office of Assistant Secretary of Agriculture, to succeed the late lamented Mr. Brigham. We trust that President Roosevelt will appoint Prof. Thompson, as we believe he possesses the qualifications necessary to fill that high position with satisfaction to all.

* * *

Car-Load of Texas Bee-Keepers for St. Louis.—H. H. Hyde, of Floresville, Tex., is making up a car-load of bee-keepers to go to the St. Louis convention together. The train will leave San Antonio the evening of Sept. 24, over "Katy." Those who are going, from that region, and wish to get with this crowd, or join it on its way out of Texas, should write to Mr. Hyde for full particulars and sleeper rates. It's the best way to go. No one who was in the special car-load to the Los Angeles convention last August will ever forget that trip. It was a bee-keepers' meeting over 2000 miles long.

Convention Proceedings

Report of the Michigan State Bee-Keepers' Convention.

BY E. B. TYRRELL, SEC.

(Continued from page 487.)

COMB OR EXTRACTED HONEY—WHICH?

QUES.—"Which is more profitable to produce, comb or extracted honey?"

Mr. Larrabee produces comb honey, but will change to extracted next season. He really favors comb honey, but hasn't the time for it. He would use the Langstroth hive, either 8 or 10 frame.

Mr. Griggs favors comb honey. He uses both bee-way and plain sections, but favors the plain sections. He is not sure that he gets as much honey with separators, but he gets it in better shape. He prefers the 10-frame hive, as it requires less work and attention, and uses full sheets of foundation in both brood department and supers. He hives the new swarm on the old stand, puts supers from the old hive on the new swarm, and practices tiering up. He puts the empty super under the partly filled one during the height of the honey-flow, but on top at the close of the flow.

Mr. Smith produced comb honey last season from bees he bought, and secured the most honey with plain sections and fence separators.

Mr. Wood discarded everything three years ago for plain sections and fences. He uses sections 4x5x1½, 3⅜x5, and 4¼x4¼x1½. He prefers the fence lengthwise of the hive.

Mr. Hunt says that trade has been growing very much in favor of plain sections, but he now sells more of the 4¼x4¼x1⅞ slotted than the plain.

C. M. Davenport finds it more profitable to produce comb than extracted honey, and favors plain sections, as he gets 16 cents for honey in plain to 13 for it in the bee-way sections.

Mr. Wood finds more finished sections with the fence separator.

Mr. Soper has customers complain of the posts coming off of the fence separators, and asked if that is the rule.

Mr. Griggs has no trouble if they are dry. He removes the separator with a knife.

Mr. Wilson has no trouble with the posts coming off, and prefers the 4¼ plain to the 4x5. He wouldn't use bee-way sections.

Mr. Woodman has sold more 4¼x4¼x1⅞ bee-way sections than any other kind, although the sale of plain sections is on the increase. He would prefer the 4¼ bee-way. He found more fancy honey in 4¼ than in the plain.

Mr. Hutchinson said a man in New York, in cleaning sections, had some coarse wire-cloth stretched on 2x4 pieces, and rubbed the sections on this cloth for cleaning.

C. W. Dansforth asked why so many produce extracted honey. He prefers comb honey.

Mr. Black wanted to hear from those who produce both.

Mr. Chapman started 20 years ago producing comb honey, but soon found he could get in his locality 5 or 6 pounds of extracted to one of comb, because the nights are so cold that bees can't work in the supers to advantage. Location makes a big difference.

Mr. Ludington has kept bees 30 years, and prefers extracted. His best yield of comb honey was 140 pounds, while his best yield of extracted was 360 pounds from one colony. His average yield per colony is 150 pounds of extracted.

Mr. Leach thinks that location plays a big part. If located near market, comb honey is preferable, while if it must be shipped far extracted honey is more profitable. He now prefers to extract what he has to ship.

Mr. Wood prefers to produce extracted. He has produced both, but will run exclusively for extracted in the future. He can sell extracted at 13 cents to comb at 16 cents. He prevents swarming by placing a frame of unsealed brood in a hive filled up with empty combs, then puts on a hive of empty combs, and the hive of brood on top.

Mr. Chapman tried this way, but did not like it. He kills the queens at the beginning of the basswood flow, and the bees fill up the empty cells with honey, thus getting in good condition for winter.

Mr. Dansforth asked what time is best to put on supers.

Mr. Griggs said any time the hive becomes crowded, whether the honey-flow has started or not.

USE OF QUEEN-EXCLUDERS.

QUES.—"When and why would you use queen-excluder?"

Mr. Chapman uses the queen-excluder for extracted honey. He wants the queen confined to the lower story during the honey-flow. He uses the 8-frame hive.

Mr. Griggs uses queen-excluders when hiving swarms, if the swarm is large. He does not use them on old colonies. He produces comb honey.

Mr Smith said if you wait a short time after hiving a swarm before putting on supers, it is not necessary to use the excluder.

Mr. Hutchinson said it isn't necessary to use a queen-excluder on the old colony for comb honey, but does on the new swarm.

ELECTION OF OFFICERS.

The election of officers resulted in the following being elected:

President, W. Z. Hutchinson; Vice-President, E. M. Hunt; Secretary, E. B. Tyrrell, of Davison; and Treasurer, D. D. Wood.

The time and place of holding the next meeting was left to the Executive Committee.

Friday morning there was held a joint session with the fruit-growers. Pres. Hutchinson read the following paper on

SPECIALTY VS. MIXED BEE-KEEPING.

Time was when many of the industries were represented in one family. Flax and wool were grown, spun and made into cloth and worked up into clothing. Cows were kept, and cheese as well as butter made for home use. Poultry and a few colonies of bees added to the comforts of the household. But there is no need of going into detail; every one knows how people lived 100 years ago.

Cheap and rapid transportation has encouraged the invention of machinery, the building of factories, and the classification of labor. This has brought about *specialty.* No one disputes that this condition of things is better. By it our comforts are more than trebled. Some industries branched out as specialties much sooner than others. Bee-keeping was among the later ones. At least, however, it has become recognized as an industry of itself.

At present, however, there are farmers who are keeping a few bees—perhaps a good many bees—and apiarists who are managing small farms, perhaps large ones; there are men engaged in some other occupation who are thinking of taking up bee-keeping, or may have already done so; and there are bee-keepers asking, "What will best mix with bee-keeping?"

I have little faith in that old saw about "not having all of the eggs in one basket." *I* say, yes, have them all in one basket, and then carry that basket so skillfully that none are broken. I know there are trying seasons for specialties in any branch of business; times when it might be better, *in that particular year*, if there were more than one egg-basket; but the specialist does enough better, in the good years, to bring specialty out at the head in the long run. The specialist can have the best tools, appliances, and labor-saving implements—things that the dabbler can't afford. He can do and have many things in a wholesale way that would be unprofitable upon a small scale. Upon this point Mr. R. L. Taylor once wrote:

"A multiplicity of occupations multiplies the burdens of responsibility, induces unrest and embarrassment, and our powers becoming overtaxed, carelessness, slovenliness, unthrift and failure result. A 'Jack at all trades' is almost a synonym of a ne'er-do-well. What reason is there for dulling the edge of skill, and sacrificing thoroughness, by combining another business with that of bee-keeping? Not certainly to fill up time. Bee-keeping as a specialty is no small business. It is capable of great expansion. It can well furnish work for every day in the year, and the larger the business the smaller the proportional expense of the plant and the management, and, consequently, the larger the profits. If bee-keeping is so unprofitable as a specialty that the operator must pursue another business to eke out a living, then it is too unprofitable to be pursued at all, and should be abandoned altogether. If it can be made profitable as a specialty, with all the advantages that specialty brings, then it can not be made profitable as a subsidiary pursuit. We see this demonstrated in practice. It is not the specialist, but the *non*-specialist, that fails."

Many professional men take up bee-keeping as a pastime. With them I can not have any more argument than with the bee-keeper who studies music for pleasure. But upon a money basis it is a far different thing. When a man is engaged in some pursuit that is capable of absorbing all of his energy and capital, I doubt if he can add to his pleasure or his pocket-book by adding some other business to his regular occupation. The bee-keeping specialist, with his hundreds of colonies, his improved hives, appliances and methods, can and *does* produce honey more cheaply than the man with a few colonies. By specialty is not meant that a man does *nothing* else, but that it is his *main* business.

It is true that there are industries in which there is a mutual advantage in their combination. The fattening of hogs, and the running of a grist-mill, or of a slaughter-house, is an example. The keeping of swine and the raising of apples also brings about a mutual advantage. The swine enrich and "cultivate" the soil, and eat the wormy apples that fall. This is good for the trees, and the apples are good for the hogs. There is no business that can be united with bee-keeping to any *great* mutual advantage. There is a *slight* mutual advantage in the keeping of bees and the raising of fruit. Not small fruit that must be picked when the bees are swarming. There is also some advantage in the raising of alsike clover, or of buckwheat, but not sufficient to warrant a bee-keeper in buying a farm, or a fruit-grower to run an apiary.

I hope no one will imagine that I am advising bee-keeping as a specialty without previous experience. How this experience shall be acquired, although an interesting topic, is not the one now under discussion. I might say, however, that nearly all of our bee-keeping specialists acquired this knowledge in a small way in connection with some other pursuit. They were better fitted for bee-keeping, and, at last, the old business was dropped for the new. Some of our specialists learned their business by an apprenticeship to some successful bee-keeper, which is the quickest and most preferable method.

Let us suppose that the highest success is attainable only by specialty. Having done this, we must not forget that there are "many men of many minds;" that "circumstances alter cases;" and that all men and all cases are not fitted for specialty. Some men prefer to lessen the risk of total failure, by having the eggs in more than one basket, even if it makes *costly eggs*. A man with a small farm may have time to care for a few bees, or a farmer may have sons and daughters who can do a large share of the work. The reasons *why* a man sometimes desires, or is compelled, to mix something else with bees are too varied for mention here. It is evident that the greatest success can be hoped for only with specialty, yet no cut-and-dried, cast-iron rules can be laid down. A man must study himself, his surroundings, and the conditions of his particular case.

It is evident that those occupations will best mix with bee-keeping that can be followed in the winter; or at least those requiring little or no attention during the busy season with the bees. What would be best for one man would be poor business for another. Among the avocations that have been mentioned are wood-chopping; teaching the district school in winter; or teaching singing school or writing school; raising grapes or apples, or other fall fruits; keeping Jerseys and making winter butter; canvassing, broom-making, etc.

W. Z. HUTCHINSON.

This was to have been responded to by Ernest R. Root, but he being absent Secretary Tyrrell responded with a few remarks, agreeing mainly with the views given by Pres. Hutchinson.

The Friday afternoon session was called to order at 2:15.

BUYING BEE-SUPPLIES—ADVERTISING HONEY.

The question of buying bee-supplies was first discussed as a measure to hold our membership, but as a plan more easy ty try, the following motion was passed:

Moved and supported that the secretary of the Michigan State Bee-Keepers' Association be authorized to use any funds in his hands belonging to the Association, in getting up a pamphlet showing the advantages of honey as food, and giving a list of names and addresses of members, together with the amount and kind of honey each has for sale, how put up, etc., and this pamphlet be advertised in some desirable medium, as a daily paper. This means that every member has an equal chance of selling his honey directly to the consumer, or whoever answers the advertisement.

"SHOOK" SWARMING.

The question of shook swarming was taken up. Mr. Townsend has practiced it on one yard for two seasons with success. He loses about the same percentage from leaving the hive as natural swarms. He doesn't use drawn comb, but full sheets of foundation in the brood-nest, and waits for queen-cells before shaking. He visits the yard once a week.

Mr. Griggs had about 4 out of 5 swarms come out after shaking. He doesn't like the practice of shaking. He shakes them on full sheets of foundation. If a comb of brood were put in the hive they staid all right.

Mr. Morgan said when he put in frames of brood they would build queen-cells and then swarm.

Mr. Townsend thinks that brushed swarms will stay just as well as natural ones.

Mr. Ludington has put new swarms in hives that had previously swarmed, with a young queen, and never had them swarm out. He has changed places with a weak and a strong colony, caging the queen of the weak colony, and had good results.

Mr. Woodward asked if Italian bees are more apt to swarm than others.

Mr. Wood said not. He gets queens from Italy that will not swarm.

Mr. Olin said he agrees with Mr. Wood, that queens direct from Italy are poor swarmers, and very gentle.

Mr. Wood gets as high as 180 pounds of comb honey from a colony with an imported queen.

Mr. Cavanaugh said Italians are more for swarming, in his experience.

Mr. Griggs had better results last year from black bees. They were also better to handle than the Italians.

Mr. Wilson has as good results from Italians.

Mr. Wood says many breeders in Italy send Cyprian queens for Italian. Italians are dark.

The question of bees locating a home was discussed, with the decision that they sometimes do.

The convention adjourned. E. B. TYRRELL, *Sec.*

Contributed Articles

Management for Few Unfinished Sections.

BY G. M. DOOLITTLE.

HOW to manage our bees so as to secure the greatest yield of comb honey, is a question of great importance to all those who are engaged in producing such honey for market, but comb honey is of little value unless pretty nearly, or fully sealed over, so that how to manage our bees so as to have few uncapped sections in the fall is a question of more vital importance, perhaps, than the one we have been in the habit of regarding as the greatest. For years I was troubled by having from one-fourth to one-third of the combs in the sections not fully sealed at the close of the honey harvest, which were salable only at a reduced price; but of late years I do not have as many as formerly.

After experimenting for some years in this matter I became convinced that the cause of the trouble was in giving the bees too many sections; and especially conducive to this was the plan of tiering up sections late in the season. Many, yes, very many times, years ago, I spoiled a promise of an abundant yield of comb honey by tiering up four or five days before the honey harvest closed. To tier up sections profitably, requires considerable tact, and especially do we want a thorough knowledge of the honey-resources of the field we occupy.

It has seemed to me that there has been too much injudicious talk during the past regarding not allowing the bees, under any circumstances, to cluster on the outside of the hive, the idea being generally conveyed that, when bees thus cluster out, they need more room. To my mind it depends upon when this clustering out occurs, whether more room is needed or not; and for this reason I said "injudicious talk." If the clustering out occurs at the commencement or in the height of the honey harvest, then more room should be given; while if at the latter part of the honey harvest, or in a time of honey-dearth, no more is needed, for more room at this time results in the one case of many unfinished sections, and in the other in an absolute waste of the time used in enlarging the hive. Allow me to illustrate:

During some seasons we have but very few days of honey-secretion, and that often after the flowers which produce the nectar are rather past their prime. At such times we often do not have on the hive more than one-half the capacity which we would use in a good season, and for this reason the bees begin to be crowded out. Hoping that the weather may continue good, and that the flowers will secrete nectar during the rest of the time that they are in bloom, we double the room for our colonies, only to have it turn bad weather again, thus giving us only partially filled sections in the fall, while had we left them as they were, and not have been stampeded at the sight of a few bees hanging out on the front of the hive, all would have been finished.

I well recollect one such season when, in time of basswood bloom, we had bad weather up to the middle of the same. At this time I had on the hives about one-half of the surplus room generally used, when, all at once, the yield of honey became abundant, and the bees began to crowd out. Hoping that the weather might be good for some time, I doubled the capacity on a few hives. The result was that the bees immediately took possession of the empty sections, while the weather turned unfavorable again, and when the season was over I did not secure half as many finished sections from these colonies as I did from those which were allowed to remain as they were.

Again, very often after basswood bloom has failed there comes on very hot weather, when not a bit of nectar can be obtained, and the result is that the fronts of the hives are black with bees. According to the advice of "never allow your bees to lay out," or "whenever you see the bees laying out, more room should be given," the sections should be hustled on at once, till there is room enough for all the bees inside, before the bee-keeper could rest in this matter; and some have gone so far as to tell us at such times as this (at least no qualification was made in the matter as to time, regarding the yield of honey, etc.), we should smoke the bees in, after having given the room, continuing this smoking until they would stay in the hives.

Any one can see at a glance that such unqualified talk and advice as this would do only harm, and be of no use, for at such times the bees are doing just as much for the benefit of the apiarist by hanging on the outside of the hive as to be elsewhere. Yea, more, for if they were out vainly searching for honey, when there was none, they would be wearing out their vitality so that they would be gone before the next nectar-secreting flowers came into bloom, as well as to consume an amount of honey from the hive equal to what was needed extra to give them strength for this vain foraging.

My plan of securing nearly all completed combs of honey in the sections is as follows:

When the bees show, by building little bits of comb here and there about the hive, that they are ready for the sections, I put on only the amount of room that I think they will reasonably fill in a very poor year, and leave them thus till the bees are well at work, when I give about the same amount more, if this is during the forepart of the honey harvest, and when this room is fully occupied I give the same amount again, if we have not passed the middle of what is our usual honey-flow. By the time the bees fully occupy the last room given, that first put on will be ready to come off, and when this is taken, if more room is needed it is put above the sections the bees are already at work in, so that they may not be forced into these last sections until they are lacking in room to work below.

If the yield continues, I keep taking off the filled sections next the hive and putting the empty on top of those the bees are already at work in, until the season begins to draw to a close, when, as fast as the full are taken, the others are lowered down till the space is contracted to the original capacity that was first put on. In this way the bees are given all the space they really need, while the chance for many unfinished sections in the fall is quite small. Such items as these are well worth looking after and studying upon; for they who understand the most about all these little kinks of practical bee-keeping are the ones who will make the greatest success in the apicultural world.

Onondaga Co., N. Y.

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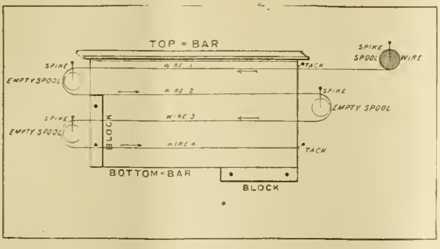
A Method of Wiring Frames.

BY LOUIS F. WAHL.

I ENCLOSE here a drawing showing my method of wiring frames, or one more kink to keep kinks out of wire while wiring frames.

I learned the value of wired frames and foundation in my earliest bee-keeping, but putting wire in frames had been a tangling and kinking up job with me until last summer, when I got an old table and laid a frame on the center, stood a spool of wire on its end and drove a spike through the spool in the table, about 3 inches from the end-bar to the right. I then took three empty spools and drove spikes through them in the table at the center of the pierced holes where the wire bends around the end-bar—two on the left end and one on the right. I then nailed a block 1x1x6 at the right-hand corner of the bottom-bar, and tacked a block on the inside of the frame thin enough to slip under the wires against the left-hand end-bar to hold the frame square.



To proceed to wiring, have two tacks started in the top edge of the end-bar to the right over the pierced holes, as shown in the cut. Now thread the wire, whirling it around empty spools until you get to the last hole, where you whirl the end of the wire around the track, and then drive the tack in tight. Now take the wire off of the spools and catch the wire No. 3 with the left thumb, holding your four fingers over the top-bar, then wind up slack with the right hand; then catch wire No. 2 in the same way, and whirl the wire around the tack and drive the tack home; cut off the wire and whirl the end half way around the empty spool to the right, to keep the wire from raveling until you start the next frame.

If a board the proper length and breadth were made, and bolts with round heads without any square shoulder were used to go through the spools instead of spikes, and the top edge of the spools were clipped off, I think the wire would slip off the spools more easily, and there would not be so much slack to wind up. Mr. W. L. Coggshall uses only two wires in the frame, and cuts the wire the proper length before wiring, therefore no spools would be required; but where more than two wires are used the spools are desirable.

By the way, I worked for Mr. Coggshall during the buckwheat flow in September, 1900, and graduated in the bee-business. I was not there long enough to be called "a lightning operator," but I thought I moved like lightning some of the time. On one occasion when I was uncapping, and "W. L." was extracting and filling kegs, a bee began crawling into my ear. I dropped my knife to take her out, when I heard "W. L." laugh, and saying, "Let her go; let her go; she is looking for wax."

I never enjoyed a happier time in my life, and any young man that has the chance shouldn't miss it.

Monroe Co., N. Y.

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Honey in Sections vs. Chunk-Honey.

BY G. C. GREINER.

THE recently-sprung-up chunk-honey business, with all its enthusiastic advocates, is another great surprise to me. Are we drifting back to the days of our forefathers? Have the efforts of our most prominent bee-experts—to bring about the perfection of a convenient, up-to-date comb-honey package in the shape of the world-renowned one-pound section—all been in vain? Are the almost wonderful inventions in the line of expensive section-machinery doomed to be thrown aside to make room for the manufacture of chunk-honey tubs, pails, cans, etc.? Are we bee-keepers going to lay temptation at our neighbor's door by offering the very best opportunity for adulteration, instead of casting our influence in the opposite direction? Are we willing to sacrifice our well-merited reputation of Yankee ingenuity, and neat and tasty workmanship, for an insignificant, perhaps imaginary, financial gain? These are some of the thoughts that engage my mental faculties whenever I am reminded of the chunk-honey business.

As a prelude to the few remarks on the foregoing points, which I wish to make, let me say that I may be a little cranky in my views. I do not ask or expect any person to fall in with me, or take any stock in my arguments, unless so inclined. I simply express my views as they appear to me, the result of past experience and observation.

In my earlier days—some 50 years ago—when still living on the other side of the big waters, I had frequent opportunities to witness the operations of what we considered at that time expert bee-keepers. Bees were then generally kept in the old-fashioned straw-skeps, and the only way to obtain surplus honey was to take it from the brood-chamber. The hive was tipped up, or laid on its side, and with a long, hooked-shaped knife some of the combs that appeared to contain mostly honey and little or no brood (generally side combs) were detached and taken out. The honey so gathered was stored in crocks and pails, or other available dishes, and kept to supply the home trade. When customers called for honey they always brought their own dishes, and the number of pounds they wished to buy had to be ladled out as the conditions would best permit. Without going into details, we can well imagine that the whole transaction from beginning to end was a mussy, inconvenient, and unbusiness-like affair. With the exception of the use and the advantage of the movable frames, the chunk-honey business of to-day has a striking similarity to the doings of 50 years ago.

But this is not so very serious. If bee-keepers prefer to produce their surplus honey in chunk-honey style, and consumers prefer to buy in this way, no particular harm is done, although from natural inclination I would neither produce nor buy it.

But what about adulteration? We are making a great noise about having laws passed against food adulteration (bee-keepers in particular against honey adulteration), and then we turn around and open the way, fairly inviting others to engage in this nefarious business. I do not wish to intimate that bee-keepers would be found guilty of any sleight-of-hand performances of this kind. No! bee-keepers are too honest for that; but what is to hinder the unscrupulous retailer from putting a lot of chunk-honey in a tub and filling it up with Mr. Rockefeller's corn-juice, and selling it all as honey? The very idea of mixing extracted honey with comb honey bears the stamp of trickiness on its forehead. Why mix it? Is it necessary to dispose of our extracted honey under the disguise of comb-honey? If we wished to sell extracted honey why not make a clean job of it and sell it as such—it will sell on its own merits if properly handled; and then produce the comb-honey in neat, clean sections, and sell them as comb honey. This would not only be more business-like, but it would reduce the chances of adulteration 50 percent; we would be sure that the comb honey, at least, could not be adulterated.

Then, again, what is the object in producing chunk-honey? If it is easier and cheaper to produce it we also get a cheaper and greatly inferior article by that means, which has to be sold at a less price to sell it at all; and if this is the case, I emphatically say, *Don't produce chunk-honey*, for we only run competition to our own business. Better produce a No. 1 article and get a No. 1 price, even if it is a little more expensive.

But I hear some one say, "It will bring as much in market as the best section honey." This I doubt very much. It may be true in some cases, where consumers never had an opportunity to get acquainted with the more attractive, neat and tasty section-honey, but in more progressive localities, where the people have been educated in their tastes and notions by the progress of the times, chunk-honey would have to take a very prominent back seat. And this is not strange.

Let us step into one of our up-to-date grocery stores and look around. There we find on one of their highly polished counters, conspicuously exhibited among other first-class goods, a clean, tasty and properly-put-up case of 24 A No. 1 sections of extra-white clover honey. Near by, we will suppose, stands a tub or crock of chunk-honey, with a ladle or large spoon for the means of distribution. To make a display of its contents, the vessel has to be open, thus making a grand gathering-place for all sweet-loving insects, to say nothing of the dust that is constantly settling on our precious sweet. To retail it, the buyer has to furnish his own dish, or the grocery man has to supply the necessary utensil in the shape of a wooden butter-tray or paper oyster-pail. In either case it is a wasteful venture, for a good proportion of the purchase will remain sticking to the dish when the honey is finally transferred to the plate for the table, and, if ever so carefully managed, it will be more or less mussy.

Then compare this to the handling of sections. Any number of pounds can be readily taken from the case and wrapped up; it makes a convenient and clean package to handle, and when the good housewife places the contents of one of the sections on the table she is sure to tempt the most exacting of her table company with its tasty and inviting appearance.

With this contrast so plainly to be noticed, I can hardly believe that any rational being would be willing to buy chunk honey as long as any honey in sections can be bought at the same price; and to sell it for less would, as I said before, have a tendency to hurt our section-honey market. There is a certain class of people who are not overly particular in their demands as regards style or neatness, and these would undoubtedly buy chunk-honey if they could save a cent or two per pound. This, of course, would lessen the demand for section-honey just so much, and a downward tendency of its price would be the natural consequence.

There is another point, although not exactly in the chunk-honey line, where, I think, we bee-keepers make a mistake, and that is, to sell a little off-grade or imperfect sections at less than regular market price. This may seem no more than fair, but under certain conditions it may be detrimental to our own interests.

For instance, a short time ago a neighbor called at my place to buy some honey. He did not feel inclined to pay the full market price, but wanted to know if I had any second-grade stock that I would sell for less. I explained to him that all my honey was first-class white honey, no other being produced here, but that I had a lot of unfinished sections, reserved for my own home use, that I would sell for less per section. After looking it over he decided to take a case of 24 sections at the price I had named. I will say right here, that as near as I could estimate the weight of those unfinished sections, I charged him as much per pound as I sold my full-weight sections for.

Soon after, on one of my trips, I called at a place where the lady of the house wished to buy some honey. When I stated my prices (I had comb and extracted) she said: "Can't you sell to me as cheap as you did to such and such a person?" My reply was that he had bought unfinished honey, while I offered her all finished sections. "Oh! well," she said, "I ate some of that honey at their table, and it was just as good as your sections. If I can't buy as cheap as he did, I won't buy any." It took me some time to convince her that I had given her friend no better bargain than I had offered her.

To obviate all such trouble, and do a straight-forward, systematic business, my motto is, "Sell regular goods at regular prices." And I consider chunk-honey one of the irregularities. Niagara Co., N. Y.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Sisters, What Has the Harvest Been?

DEAR BEE-KEEPING SISTERS:—Now that we are fairly launched in the season of 1904, wouldn't it be a nice thing for each to report as to the harvest? As members of one family each naturally likes to know what the others are doing. The brothers are no doubt too busy, but can't the sisters find just a little time to give us some idea of how the bees are progressing?

Especially is it desirable to have a report from each as soon as the harvest is over. Such a report should always give the number of pounds of comb honey harvested, the number of extracted, and also the number of colonies spring count. Sometimes a report is given something like this:

"I took 360 pounds of comb honey this season."

Now, what idea can one have from that alone whether the season was a prosperous one or not? If 360 pounds are taken from 4 colonies, spring count, it's quite a different thing from getting the same amount from 20 colonies. And yet sometimes the amount harvested is all that is given, without a word said about how many colonies were engaged in the work. Come to think of it, I'm not sure any of the sisters every reported in that imperfect way—perhaps it was only the brothers.

Now, dear sisters, please keep track of the amount of honey you take, and then report, if it is only on a postal card. EMMA M. WILSON.

California Bee-Keeping for Women.

In the June number of Good Housekeeping, is an article entitled "Honey," written by Miss Flora McIntyre, the daughter of the well-known California apiarist, J. F. McIntyre, the man who has had a larger number of colonies in one apiary than perhaps any one else in the world. Miss McIntyre is a practical bee-keeper, and her father speaks with pride of the tons of honey she extracted last summer. As we might expect, coming from such a source, the article is well written. The illustrations are also good. She has a word to say about bee-keeping for women, and closes with a very pretty picture of the sunny side of bee-keeping in the wilds of California :

Here are the closing words of her article :

> I must say a word about the desirability of bee-keeping as an occupation for women. Its possibility is a settled fact; for many women have worked at it successfully. My father employed a girl last year at our out-apiary, and said that her work was more satisfactory than that of any of his hired men. It is out-of-door work, and therefore peculiarly healthful. I know, for I have tried it. After the day's work in the warm sun is over, there is nothing to do but enjoy one's self. Bees retire early, and it is not well to disturb them after sundown. Then, when the canyon is in shadow, when the air is still, sweet-scented and refreshingly cool, when no sound is heard but the hum of late-returning bees, and the rush of water in the creek, the bee-keeper saddles his pony and gallops down to the post-office; or, if he chooses, rides up the canyon. There, where the road passes between the oak tree and the sycamore, where the mountain rises on one side, and the creek flows along on the other, almost hidden by the trees which line its bank, the shades of green in the blackberry vines, and the poison oak are exquisite. He rides on and on, without a care, until the shadow reaches that long ledge of rock on yonder mountain to the east, then he turns homeward, for, when the sunlight leaves, the darkness comes quickly.
>
> On warm summer mornings there is the "dip" in the swimming pool below the barn, or for the angler the rod and line, some bait, and, presto, some brook trout for breakfast, for they bite well early in the morning.
>
> Sometimes on warm summer days, when the bees do not need one's attention, there is time for a long afternoon in the shaded hammock with a book, or with the dreams of the lovely country home which the golden honey will some day build, as beautiful and picturesque as that of any actress; of the music books and art with which it will be filled; of fine horses in its stable; of the friends who will gather to enjoy it all. All this to be some day when the bee-keeper is rich enough. With sufficient judgment, hard work and "bee-sense" this dream may be made a reality.
>
> With the end of August, the bees in readiness for the winter, the bee-keeper may go the city, if he likes.

Honey and Almond Cream.

Recipe for honey and almond cream : Honey, one ounce ; powdered castile soap, ½ ounce ; oil of sweet almonds, 13 ounces ; oil of bitter almonds, ½ dram ; oil of bergamot, ¼ dram ; oil of cloves, 7 drops ; balsam of Peru, ½ dram ; liquid potassa, ½ dram. Mix the oils with the balsam, then mix the honey with the soap ; add enough of the potassa to make a nice cream ; add this to the first mixture, and beat for several minutes.—Chicago Record-Herald.

Basswood Late, But Promising.

Basswood has not opened up yet. It is very late this year. The trees are very full of buds. We think it will be as late as July 12 before the bees work on the basswood.

MRS. ADA L. (PICKARD) BOGGS.

Richland Co., Wis., July 8.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

COMB-LEVELERS FOR PARTLY-FILLED SECTIONS.

And so Mr. Greiner has had a different kind of comb-leveler in use this 20 years. If it's "nuts and raisins," he has kept the nuts and raisins from us for a long time. The instrument looks plausible as it appears in the pictures. In weather not too hot and not too cold I guess it would work. No great harm if it does make the section *look* a little ragged —bees will soon fix that. The Taylor leveler, which works by melting off the surface on a hot plate, occupied quite a space in our papers years ago—not much said about it now. Wonder how many of the brethren are really using it. Page 438.

TWO SWARMS IN ONE HIVE OF COMB.

John S. Callbreath's scheme of two swarms in one hive full of empty comb, I'll be charitable enough to grant that it might be O. K. in some yards. In my yard, mixing bees is an abomination. Moreover, in my yard *one* swarm in a hive full of empty comb is O. K., and the fear of getting the brood-nest injuriously restricted by honey a mere scarecrow. Page 439.

WIDE FRAME VS. T SUPER—COMB HONEY MANAGEMENT.

On page 439, Dr. Miller seems to infer that I use the T super or something similar. I don't. I use the old-fashioned two decker wide frame—best outfit in the world for a lean location, *and a strain of bees that is willing to use it.* I put on wide frames to hold 40 sections, and more than half the time can let them stay on till the close of the season. Heavy flows of honey like angel's visits at my place. Surplus mostly something else than white, anyway. A little travel-stain does not show quite so badly on darker grades of honey. Another important thing—a large share of my customers are not *spoiled*, and do not demand extra-white honey. All these things must be weighed by that beginner before he follows me in preference to Dr. Miller. No, the central bottom sections are not so white-looking as the same honey is farther away. To leave one of my upper stories on till every section is done—it is not my *intention* to do that. Intend to take out the two or three best wide frames before that. So I guess I am not contradicting Dr. Miller's practice much more than the differing circumstances require. I'll yield so far as to admit (up to the point of the Doctor's experience) that sometimes go-backer sections have been taken off at last finished up very smoothly. Probably Dr. Miller will admit that sometimes a finish on two different levels and a general roughness is the outcome.

POPULAR PRESCRIPTIONS PARTLY PUNCTURED.

June is the season of green peas, but presumably we should not think of that particular shade of the spectrum in connection with the P. P. P. P.'s of "Peiro's Propolis Porous Plaster." Let us think of brown or gray, or some other of wisdom's colors. The porous plaster with propolis for medicated surface, and the turpentine liniment with propolis as ingredient seem all right. But so large a proportion of our whole population have a certain amount of superstition in their medical ideas, that a word of caution for weak brethren may not be amiss. Let us not cultivate the whim that propolis must be efficacious because it is *our* stuff—or that honey must of course have wonderful healthfulness because it is our product. "To the testimony" on all such matters, and no foolish assumptions. Page 445.

LONG WINTER CONFINEMENT OF BEES.

As to the length of time bees will stand confinement, the 122 days of John H. Clausen, page 315, are badly distanced by the 165 days of F. L. Day, page 446. And then comes Doolittle's golden colony, page 422, that in a farm cellar wintered perfectly 188 days. This seems to be the cap sheaf at present. These latter cases, however, not being out-of-doors are a bit less natural than the other.

POSITIVE TESTS IN THINGS APICULTURAL.

Positive tests, applied in a scientific manner, are often called for—called for as if they could be had by just opening a box and taking them out. The editorial note on page 420 very properly calls attention to our limitations. In regard to overstocking (and many other things) how can tests be made positive enough and scientific enough to satisfy captious people? Better give it up in most cases. Intelligent, practical men, with minds directed to a subject, will usually get the core of it. Until we can get greater definiteness let us be thankful for that.

PICKLED-BROOD SUGGESTION.

Prof. Cook's suggestion as to pickled brood is worth thinking of. May be not so much a definite thing of itself as a condition that sets in when considerable amounts of brood die from almost any cause. Page 420.

GRADING SECTION HONEY.

In grading honey, have standard sections of the proper grades set up for the eye to work from. Otherwise our judgment slides up and down with different times and days —and especially with different amounts of light. Page 421.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get them subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Treatment of Pickled Brood.

From reading the text-books and the bee-papers I am satisfied that my bees are affected with pickled brood. I wish you to advise me how to get rid of it. Is it best to melt up the combs, or use them again? I am satisfied the disease disappears when the honey-flow comes, so it is hard to detect it. And by changing combs in my apiary I have scattered it nearly over the yard. Iowa.

Answer.—General Manager France thinks the disease is not contagious, so it is quite possible that it was not established in the different colonies by means of the frames of brood that you scattered about, but by means of a lack of unsealed honey and fresh pollen. The probability is that no present treatment will be needed, because, as you say, the disease disappears when the honey-flow is on. It is not necessary to destroy the combs. As the disease disappears in a honey-flow, if it appears again you can produce a honey-flow by feeding moderately, which will probably prove a satisfactory treatment.

◆

Swarming and After-Swarming.

I had a swarm come out twice and cluster, and after putting them into a hive they came out and went back to their old hive. The next day I found a dead queen on the front of the hive. Two days after, they swarmed and I put them into a hive and they stayed. I put them on the old stand, with the hive they came out of beside them, intending to prevent an after-swarm by moving the hive in one week (as per instructions in the bee-books). In two days I had an after-swarm, which I dumped back in front of the old hive, and put on an Alley trap, and the next noon I found 4 dead queens in the top of the trap.

1. Did the bees kill the queens I found?

2. Did the bees drive them out? and is there probably one queen left in the hive?

3. Is it practical to use the Alley trap at swarming-time, or will it bother the bees too much?

4. Would it be practical to use it to prevent after-swarming as I did, or would there be danger of a young queen being caught while going out to mate, and the bees killing her? Massachusetts.

Answers.—1. It was a fight to the finish among the queens themselves.

2. The bees didn't drive them out, but dragged them out after they were killed. The victorious queen remained in the hive.

3. The trap does not bother the bees so very much, and you can rely on it to catch the queen.

4. The trap must be intelligently used. The bees would hardly kill a queen caught in the trap, but it would have to be removed to allow her to take her wedding flight.

◆

Uncapping Honey—Candy for Queen-Cages.

1. How do you use the uncapping-knife? Do you have two knives at one time, one in water while using the other (as talked of at the California convention)? Does the water not spoil the honey? Somehow, uncapping goes slow with me. There is no bee-keeper near here that I can see. I have "Langstroth Revised" and "Forty Years Among the Bees."

2. If you put the knives in water, must the water be hot or cold?

3. What kind of knife do you use? I have the Bingham.

4. In the spring, when the 10 frames in the brood-chamber would be full of brood and honey, I would put on 10 empty frames, comb or foundation, then when well filled put on sections. It worked well until this spring they just swarm and swarm, and then swarm again. Before this spring I could control them as I pleased. I need half extracted honey and half in sections. Is my way worth anything? Would you advise me to do differently?

5. How do you make candy to put in queen-cages for the bees to clean out so as to free the queen? Kansas.

Answers.—1. I do not use an uncapping-knife—at least I have not used one for two or three years—as I work for comb honey; but when I did use one I used a single knife. There is no doubt an advantage in having two. Scarcely any water will cling to the knife when it is lifted out, especially if a little shake is given to the knife, and a very few drops of clean water will have no appreciable effect on the honey.

2. "You pays your money, you takes your choice." Quite a battle has been waged between the advocates of hot and of cold water. I suspect you'll find it a little like this: When combs are warm and soft cold water will be all right; when tough and a little cold, warm water will work better. It's an easy thing for you to try each.

3. Mine is the Novice, which I got before there was any Bingham. There is probably nothing better than the Bingham.

4. Probably nothing different is advisable, and I doubt that there's any better way to get part comb and part extracted. Some years are worse than others about swarming, and likely next year will not be so bad. In any case you ought not to have more than one swarm from each colony. See "Prevention of After-Swarms," page 435.

5. Turn to page 321 of your "Langstroth Revised," and find instructions for the candy desired, which is called Scholz candy. You're not likely to want as much as there given, so try this: Take a small quantity of the best extracted honey (easy to add to it later if you haven't enough). Better heat it (don't burn it), although it will do very well cold, then pour it on some pulverized sugar on a board or table, and stir and knead thoroughly, adding more sugar till you have a very stiff dough. Let it stand a day or two, and add more sugar if it has become too soft, so as to flatten down.

Your postage stamp frightened me, but it revived me greatly that your questions were not only plainly numbered, but each number had a ring around it so I couldn't miss it. I wish all might be as considerate.

◆

Swarming—Tested Queen Slow Layer—Using Bee-Escapes—Nuclei Swarming.

1. When one queen is heard piping, answered by queens in cells "quahking," does it in every case positively mean that a prime swarm has already issued, and that a second swarm will issue in about 48 hours? Or is this ever heard before the first swarm, where the laying queen is about a year old?

2. (*a*) Is it a safe guide to expect a swarm to issue on the first favorable day after queen-cells are sealed? (*b*) Are they likely to swarm before cells or cell are sealed? (*c*) Are they likely to delay swarming for many days after the cells are sealed?

3. I have a tested queen apparently perfectly healthy that has never laid an egg since her introduction exactly one month ago on June 18. Is she likely ever to lay again?

4. I have another tested queen that did not lay till 23 days after introducing, though she is now laying sparingly. Will she be all right now? Both these queens are in strong colonies, one of blacks and the other light hybrids?

5. In using a bee-escape to take a super off a hive that has only one super on it, doesn't it crowd the bees too much in the brood-nest in a strong colony, and would it not be better to put another super with sections and foundation in it next to the brood-nest, the bee-escape over that, and the super to be removed over that? I generally put the escape on in the evening, and take it off the following morning between 9 and 10 o'clock.

6. What should a colony weigh for wintering in an 8-frame-hive, with combined hive-stand and bottom-board and ventilated gable cover?

7. Will four and three frame nuclei set out June 9 be likely to swarm this year, under favorable conditions? Virginia.

Answers.—1. In general, yes. But if the old queen should be killed, or by any means put out of the way after the queen-cells were made ready for swarming, but before they were sealed, there would still be piping and quahking upon the emerging of the first young queen, although no swarm had previously issued. I don't think you will hear any piping before the issuing of a swarm with a *laying* queen, no matter how young she may be.

2. (*a*) Pretty safe. (*b*) No. (*c*) No. Yet there are exceptions to all of these. When queen-cells have been destroyed in a colony, I have known them to swarm the next day with nothing farther than eggs in queen-cells. I don't know whether they will ever swarm before having sealed cells if left entirely to themselves. I doubt it. Bad weather may delay a prime swarm, but not for many days.

3. Possibly she may, probably not.

4. Likely she will never be a prolific queen. But if she has been through the mails, having been all right at the start, you may rear young queens from her and expect them to be as good as if she had continued laying well.

5. No, there is no need of an empty super under the escape to receive the bees. Now don't misunderstand me—there may be a great need of an empty super, but not because you are taking off a full one. For if a second super is needed at all, it is needed before the full one is finished. If you are going on the plan that the bees are never to work in more than one super at a time, you are probably making a costly mistake. I know that some advocate having not more than two supers on at a time, but I'm sure I should lose if I didn't sometimes have 3, 4 or more supers on at a time. At the close of the season, you may wind up with only one super on, and if it crowds the brood-nest to have the bees of that super go down, let it crowd. No use to put on an empty super when there is nothing to be stored in it.

6. Unless that cover is extra heavy, 50 pounds. More will do no hurt.

7. Hardly.

Bee-Management—Queenless Colony.

1. What course would you pursue with 3 colonies of bees? Last winter 3 colonies died, and I put the 3 hive-bodies, 2 of them under good, strong colonies, and the third above another good colony. The bees have filled both bodies, and each colony is working in the second super. It will not do to try to winter them in such shape, so how shall I manage them? The queens' wings are not clipped.

2. I have one colony that is very weak, and may be queenless. I put a frame of brood and honey in that hive a week ago, and I fear there is not force enough there to care for the frame given.
IOWA.

ANSWERS.—1. You say, "It will not do to try to winter them in such shape." Why not? They would probably winter all right in the two stories. But it will be an easy matter to reduce them to one, either now or later. Put a queen-excluder between the first and second story, and in 21 days there will be brood in only one story. Then you can take away the story without brood, shaking off the bees from the combs. When putting the excluder between the stories, it will be a little better to see that the queen is in the lower story, and to put in that story the frames that contain most brood. If you so desire, you may make a quicker job of it without any excluder. Merely take away at once half the combs, those containing the least brood, and dispose of them elsewhere.

2. Take a frame of brood and adhering bees from some other colony, making sure you don't get the queen, brush off the bees at the entrance of the weak colony, and return the comb where you got it. If you want to make it still stronger, do the same thing with another comb. But if you give too many strange bees you may endanger the queen of the weak colony.

Brood-Diseases—Swarming, Etc.

At 11 a.m. yesterday, I had a swarm of bees, hived it, and they are working on foundation starters. The parent colony had no queen-cells, and on looking for some I discovered a number of dead larvæ lying on their backs with ends up, as per description of pickled or black brood. There is positively no odor that I can distinguish. I have done nothing since finding the dead brood but study what to do. I have just put the bees, left in the parent hive, with the swarm. They left in the parent colony a full set of nurse-bees, about four or five quarts, I should think, and the six frames of Jumbo brood with hundreds of hatching bees I have just put into the wax-boiler, over a hot stove—the most cruel thing I have ever done in my apiarian experience. The authors on bee-diseases say *destroy* if you do not *know*, and I do not know. I have found 2 other colonies that show the same disease to a less extent. These bees are all in new Jumbo hives, transferred about June 12, and are on Miller bottom-boards, with full entrance open.

There are still four frames of foundation drawn and partly filled with honey, but no pollen. I shall keep these frames until I read your answer.

I might add that the nurse-bees had started a single cell since the parent queen left them, and that the young hatching bees that come out of the cells adjoining dead larvæ seem strong and active.

1. What shall I do with the remaining colonies that show disease?

2. What made the bees swarm when some were willing to stay and try to rear a queen?

3. Would I better have fed the honey than to have thrown it into the boiler?

4. Could I have put the frames of brood in the hive, over another hive with wire-screen between, and let them hatch and live, rather than to have boiled them up with the wax? The colony now fills 10 Jumbo frames nearly full.
ILLINOIS.

ANSWERS.—1. In a matter entailing such serious possibilities, I would not trust the advice of any one, no matter how well informed about bees, unless he were thoroughly conversant with brood-diseases. I am not that, and advise you to send sample to one of the experts in that line. I may say, however, that I *think* you need not be greatly alarmed, and that notwithstanding the appearance of the dead brood the disease may disappear of itself. I base my "think" on the fact that I knew a case that appeared the same as yours, which did not terminate disastrously.

2. There seems nothing in the case different from an ordinary case of swarming, unless it be that no queen-cells were started, and I am wondering whether it might not have been that they had started cells previously and you had destroyed them.

3. While it *might* have been safe to feed such honey, it it is better to take no chances, and I would not feed it without boiling.

4. Yes, I think so.

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  Leaving the joke on me,
I elevate my fist and *mash*
  That far too busy bee.

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I never worked with bees much, but left them to care for themselves mostly, and consequently lost some, but I have 7 colonies in pretty good shape. They swarmed too much last year, but are not doing so much of that so far this season, and are filling supers nicely. White clover is in full bloom. It is not quite time for basswood here yet.

DAVID HAYNES.

Dallas Co., Iowa, July 4.

The Bee Journal a "Whole Team."

I do not think that I would want to be a bee-keeper without subscribing for the "Old Reliable" as long as I can. It seems to me that trying to do without the American Bee Journal would be like the fellow that wanted to be a farmer without first buying a team of horses. FRED W. MANEKE.

Madison Co., Ill., July 11.

Great Bloom—Little Honey.

We have had a great bloom of clover, etc., but the bees have gathered *very* little honey this year.

F. H. DRAKE.

Worcester Co., Mass., July 11.

The National and Honey Exhibits.

I see on page 469 that C. P. Dadant writes about making an exhibit at the World's Fair at St. Louis. I have been wondering why preparations were not made for a large exhibit. I think the National Association ought to make an exhibit equal to, or better than, any other. If every member will furnish honey we can make a large exhibit. I, for one, will furnish some honey; I have extracted and chunk honey, and put it up in quart Mason jars. I think it would be better to have it all put up alike. Let the Association furnish packages at cost.

I say, make a large exhibit at the Fair, and talk the selling part later on. Won't making an exhibit at Fairs be better and cheaper advertising? The Association can sell the honey after the Fair is over. Can't some arrangement be made for the National Association to make exhibits, in its name, at all the State fairs?

I see extracted honey quoted on the market at 4 to 6 cents per pound. I would like to keep all the bees that I can handle properly, but if there is not something done to raise the prices above those quoted, I will do something else.

I would suggest on the honey-selling part of the Association, to turn every member out, and prosecute him, who tries to put any adulterated honey on the market.

My bees stored 200 pounds per colony, spring count, last year, and they promise more than that this year.

Please let me know about saving honey and how to put it up.

N. R. White.

Saline Co., Mo., July 9.

[We will have to refer this to General Manager France, as no plans of making any exhibit by the National Associatson have been arranged, so far as we know.—Editor.]

Banner Crop—Selling Honey.

I am having the banner crop this time, sure. I went into the winter battle of 1903–04 with 48 colonies and came through with 100 percent.

I am sorry to see quotations so low, although it does not affect me; I have learned to do pretty fair peddling honey, and to get something for my honey. I get 20 cents for Ideal sections (this season they weigh 16 ounces, and some 17 ounces); and 18 cents for 4¼-x4¼x1⅞. I sell through the country, and instead of selling to some grocer for 12½ or 13 cents and take it in trade I sell direct to the consumer. I canvass a town, talk honey and bees, and treat people honestly and fairly. I make four grades of my honey, carry a sample of each grade, and make a sale nearly every time. My best sales last week, per day, canvassing, was $61.10, and my lowest $42.25.

I have increased to 70 colonies, and have taken 50 pounds from some of my colonies.

When I get time I may tell just *how* I work up my trade, and *how* I hold it.

J. M. West.

Pike Co., Ohio, July 9.

[We shall be pleased to publish the details of your method of working up and holding a honey-trade, Mr West. We hope you will find time to do it very soon, so that it may be of use to others the present season.—Editor.]

No-Drip Strips—No Clover Honey.

I am glad to see the kick about the cleats in shipping-cases, on page 451. It is my trouble, too. I want them 1 inch by ¼ of an inch. The cases I bought last came with cleats ½ inch by ⅛ of an inch. Some other party gets my next order.

No clover honey here this season. The bees are at work on basswood now, and I am in hopes of getting a little.

E. C. Wheeler.

Marshall Co., Iowa, July 11.

Some Swarming Experiences.

I deliberately let one small swarm go to-day because it got in such a high and difficult place. Another swarm, a big one, chose a high and difficult place. Before its turn came yet another prime went up there as if to join them, but mostly "rallied round." Soon both swarms were mostly rallying around together, and continued at it for a very

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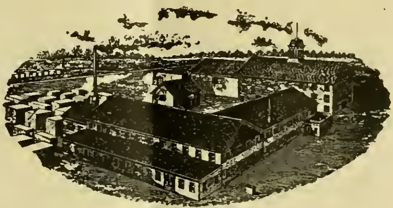

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on poultry amounts to many times the cost of Lambert's Death to Lice—the sure preventive. All loss can be saved and more profit made by the use of this famous powder. It frees setting hens from these pests without harming eggs or chicks. A trial box 10c will prove it. 100 oz., by express. $1 00 "Pocket Book Pointers" free

D. J. Lambert, Box 707. Apponaug. R. I.

Additional Sleeping-Car Service.

The Nickel Plate Road has placed an additional vestibuled sleeping-car on train leaving Chicago at 9:15 p.m., daily, and also on train from Cleveland to Chicago, arriving Chicago 7:40 a.m., daily, for passengers between Chicago and Cleveland, in both directions, and intermediate points. Three daily trains. No excess fare. American Club Meals, ranging in price from 35c to $1.00, served in Nickel Plate dining-cars; also service a la carte, and mid-day luncheon, 50c. Chicago city ticket offices, 111 Adams St., and Auditorium Annex. 'Phones Central 2057 and Harrison 2208. Chicago depot, La Salle St. Station, cor. Van Buren and La Salle Sts. 16—28A3t

Wanted — Bee-Keepers

To write for our prices on SECTIONS. We manufacture them, and are dealers in BEE-SUPPLIES. Send for special price and Catalog.

AUG. LOTZ & SON,
24A17t CADOTT, WIS.

great length of time. At length the great cloud slowly rolled away with apparent intent to go to the woods. I bade them good-by. On the road, however, they passed directly over a bushel basket which I had with bees in it, and many of them were rallying around. Over this alluring spot they halted in their career—and with much waiting I had the whole mess down on the basket.

The swarm left to go when they got ready; staid only a little over an hour.

E. E. HASTY.

Lucas Co., Ohio, July 8.

A Very Dry Season.

This part of Los Angeles county will produce no surplus honey this year. If the bees make their own living without feeding they will do better than I expect. We are having a very dry season.

M. K. CHANDLER.

Los Angeles Co., Calif., July 2.

Always Up-to-Date.

I like the American Bee Journal very much; it is always up-to-date in matter pertaining to the busy bee.

J. F. PEARSON.

Humboldt Co., Calif., July 5.

Fine Basswood Flow.

We are having the finest flow from basswood I ever saw. I have taken off nearly 500 pounds of comb and extracted honey, and have more to take off. This is the invoice I took yesterday:

XX—27 supers, being capped, of 30 sections each	810.
X—32 supers in which bees are working	960
O—15 supers just begun	450
3 extra supers full.	
13 extra supers beginning.	

I am putting on 500 sections to-day. I have increased from 36 colonies to 64, but I bought 2 swarms.

It rained hard day before yesterday, and although there was a light shower yesterday the bees never stopped working. I can leave a comb of honey anywhere in the apiary without fear of robber-bees. But it won't last long thus, I fear; but we have lots of white clover in bloom, and although it had begun to fail, this good rain will keep it going.

J. E. JOHNSON.

Knox Co., Ill., July 7.

Prefers the Tall Section.

To-day is the day for celebration, and I am enjoying my Fourth taking swarms and watching the bees work. This is certainly a record-breaking season for the bees, as far as it has gone, that is, in this locality. I have never known the white clover to be so abundant before.

Say, Mr. York, what is that, on page 454, that A. C. F. Bartz is giving us in regard to the tall 4x5 section? I have studied Capt. Hetherington's life some, and I glory in his spunk and alertness. He was a firm believer in the tall 4x5 section, and he was the first to use them to any extent. I bought 10 Danzenbaker hives with the closed-end brood-frames, and 4x5x1⅜ sections, with the cleated separator, and I have learned for myself that the tall sec-

ITALIAN QUEENS,
BEES AND NUCLEI.

Choice home-bred and Select Imported Stock. All Queens reared in full colonies.

One Untested Queen	$. 65
" Tested Queen	.90
" Selected "	1.10
" Breeder "	1.65
" Comb Nucleus (no Queen)	1.00

All grades ready now. Safe arrival guaranteed.

For prices on quantities and description of each grade of Queens, send for free Price-List.

J. L. STRONG,
204 East Logan Street, CLARINDA, IOWA.
Please mention Bee Journal when writing.

10 CENTS A YEAR.

The Dixie Home MAGAZINE, largest, brightest and finest ILLUSTRATED MAGAZINE in the world for 10c a year, to introduce it ONLY.

It is bright and up-to-date. Tells all about Southern Home Life. It is full of fine engravings of grand scenery, buildings and famous people. Send at once. 10c a year, postpaid, anywhere in the U.S., Canada and Mexico. Six years, 50c. Or, clubs of 6 names, 50c; 12 for $1. Send us a club. Money back if not delighted. Stamps taken. Cut this out. Send to-day. THE DIXIE HOME,
24A48t No. 75, Birmingham, Alabama.

Italian Bees For Sale.

1 colony in good frame hive	$5.00
1 strong 1-frame Nucleus	1.00
1 " 2-frame " (with tested queen)	2.50
1 Untested Queen	.75
1 Tested Queen	1.00

☞ My crop last season was about 40,000 pounds of honey (nearly half comb) from 210 colonies, spring count, and increased to 280 colonies, which shows my bees are hustlers

N. STAININGER, TIPTON, IOWA.
27Atf Please mention the Bee Journal.

ANOTHER
CAR-LOAD

of Hives, Sections, and Supplies of all kinds just arrived from G. B. Lewis' Factory, and are ready to fill orders quick. Send us your orders for everything. We have it.

Louis Hanssen's Sons
DAVENPORT, IOWA.
5A26t Please mention the Bee Journal.

$10,000 WE HAVE JUST COMPLETED OUR TEN THOUSAND DOLLAR BEE KEEPERS' SUPPLY MANUFACTURING PLANT

—and are ready to do business. Write us for leaflet showing our special Hives and prices. It is the greatest bargain you ever saw.

Mondeng Mfg. Company,
147 Cedar Lake Road.
MINNEAPOLIS, - MINNESOTA.
Please mention Bee Journal when writing.

Honey AND Beeswax
SOLD BOUGHT

When you run short of Honey to supply your local trade, write to us for prices. We offer it in 60-pound tin cans, 2 cans in a box. Purity guaranteed. We pay cash for pure Beeswax. Price quoted on application. Address,

THE YORK HONEY CO.
HENRY M. ARND, Mgr
101 E. Kinzie Street, CHICAGO, ILL.

BINGHAM'S PATENT Smokers
25 years the best.
Send for Circular.
25Atf T. F. BINGHAM, Farwell, Mich.

tions, where the separator is used with full sheets of foundation, are the nicest things of all improvements in modern bee-keeping. Mr. Bartz and myself have altogether different views of the thing. By using full sheets of foundation the tall section weighs in the neighborhood of a pound, as does the 4¼x4¼.

But, as the old Indian said, if everybody saw things alike every one would be after his old squaw.

Long live old Francis Danzenbaker and the 4x5 section!

The American Bee Journal is all right. ART E. MOOREHEAD.

Leavenworth Co., Kans., July 4.

Results for 1902 and 1903.

I have been a reader of the American Bee Journal for four years, and a bee-keeper five years. I commenced with 2 colonies, and now have 30 in 10-frame Wisconsin hives. In 1902 I sold 1000 pounds of honey from 10 colonies; in 1903, 1200 pounds from 16 colonies. But when I read what some others do I fall away below. J. M. R. WEAVER.

Harvey Co., Kans.

The Season in Mississippi.

I will again report what we have done down here this year in Dixie, which is the extreme northwest Mississipi, near the Tennessee line. I am in bee-flight of a large creek-bottom which furnishes our bees' range.

Our honey-month is usually May, but we were rained out this year in May, so did not expect to get any honey, so to speak, still the bees kept up a continual work all June and up to now. So I went "bee-robbing" last week, and to my surprise found several of the largest hives so full that they could hardly hold much more; in fact, some were a real show, suitable for the World's Fair, I think.

We have had a first-class honey-dew upon the leaves of the trees here this summer. I have time and again read what our Northern bee-keepers say about honey-dew not being good or fit to eat. That just depends upon the locality in the United States altogether. Our honey-dew honey this year will do, I am quite sure, to send to the World's Fair, and if I can get it there on exhibition, in a suitable way, I mean to do so, to the credit of our county. Therefore, I want to score in favor of our honey-dew honey. That the idea of honey-dew being from aphides is a mistake is very evident here with us. It is secreted by the trees under certain conditions very peculiar, only certain years, and very infrequent (not frequent at all).

I want to add another score here in favor of the zinc honey-board agitation, which seems doubtful with some. I am an advocate of them, and will come later with a special letter and evidence on that line, if desired. They are worth $5.00 each to me.

We have had plenty of rain here lately—a superabundance. Crops are looking well, corn fine, owing to good rains.

We have a better bee-country down here than we are credited with. People who give bees good attention always succeed with them, if located near a river-bottom. Of course, in the dry hills bees can not be expected to do much, excepting a few colonies for family use. There are bee-keepers in our State making bee-keeping quite an extensive business.

Success to the "old reliable" American Bee Journal and its Editor. W. T. LEWIS.

DeSoto Co., Miss., July 12.

CONVENTION NOTICE.

National at St. Louis.—The annual session of the National Bee-Keepers' Association for 1904 will be held in September, at St. Louis, Mo.

Sept. 27 and 28 will be devoted to Association work and its interests. We expect many prominent foreign bee keepers to be present on these days.

Sept. 29, National Day.

Sept. 30, Inspectors' Day. Twenty bee-inspectors from all over the United States and Canada are counted on to introduce and discuss "The Diseases of Bees," etc.

Mr. N. E. France will exhibit, in the Convention Hall, a large map of the United States, Canada, Cuba and Europe. Each State and Country will have a shelf attached to the map with a one-pound sample of each kind of honey produced. Many other exhibits of special interest will be shown.

We expect to see the largest gathering of bee-keepers ever held in this country. A more detailed program will appear later.

GEO. W. BRODBECK, Sec.

Los Angeles, Calif.

WANTED — COMB HONEY, WHOLESALE.— Will buy your crop outright, cash at your depot anywhere in the U. S., if price and quality are right. We have salesmen in nearly every market in U. S., but buy only through Thos. J. Stanley, Manzanola, Colo., our honeyman who spends the season in the West superintending our apiaries and looking after Western car-lots of honey. Address us there direct, stating what your honey is gathered from, what grade, the average weight of section, how packed, color, etc.; quantity, when you can deliver, and lowest cash price per pound properly crated and delivered to your depot. Would like to know about what the freight rate to your nearest city. We believe that our purchases are larger than any other firm or association.
Yours for business, **THOS. C. STANLEY & SON,**
29Atf MANZANOLA, Otero Co., COLO.

Take Notice That the New Century Queen-Rearing Co. will have 1000 Queens ready for the mail by April 20. Tested, $1.00; Untested, 75c; 5 for $3.25; 10 for $6.00. Prices on larger quantities and Nuclei given on application. "Prompt service; fair treatment" is our motto. Address,
John W. Pharr, Prop., Berclair, Tex.
13Atf Please mention the Bee Journal.

WE SELL ROOT'S GOODS IN MICHIGAN
Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Beeswax Wanted for Cash.
M. H. HUNT & SON,
BELL BRANCH, WAYNE CO., MICH.

HENRY ALLEY
will be ready to ship
Fine Adel Queens!
By Return Mail on July 20.
S. F. Sampson, of Ronceverte, W. Va., says: "Your queens are good, and I can depend on them every time"
Robt. Forbes, East Milton, Mass: "Your Adel bees are away ahead of anything else I have."
Extra Tested Breeding Queens and my new book on "Queen-Rearing," $1.50. Catalog and a small booklet on queen-rearing sent free.
29A4t **WENHAM, MASS.**

Northern King Queens.
One Untested, 75c; Tested, $1.25. Try one.
Address, B. F. SCHMIDT, R. F. D. 1,
NORTH BUENA VISTA, Clayton Co, IOWA.

Wanted To Sell My Apiary of 90 colonies. Good condition: straight combs; good location. A liberal discount on fixtures and supplies. B. F. HASTINGS, Perry Park, Col.
29A2t Please mention the Bee Journal

HONEY AND BEESWAX
MARKET QUOTATIONS

CHICAGO, July 7.—There is a plentiful supply of honey of all kinds on the market with no sales being made; prices therefore cannot be more than on an asking basis. Very little if any choice to fancy comb, but a large amount of what would average No. 1 is offered at 10@12c; no sale for off grades or damaged lots. Extracted, white, 6@7c; ambers, 5@6c. Beeswax, 28@30c. R. A. BURNETT & CO.

CINCINNATI, O., July 7.—The sales of comb honey, which are made now, amount but to very little. Some fancy comb left from last season finds sales for 12½@13½c. The new is just beginning to be offered and small lots are coming in. Extracted for manufacturing purposes finds a fair demand. I quote amber in barrels from 5¼@5[illegible]c; in cans, ½c more; water-white alfalfa, 6½c; extra fancy white clover, 7½c. Beeswax, 28c. C. H. W. WEBER.

ALBANY, N. Y., June 3.—The honey market is very dull now, and prices nominal Receipts are very light and demand the same. We quote comb honey, in good order, white, 13@15c; mixed, 12@13c; dark, 10@12c. Extracted, buckwheat, 5½@6c; mixed, 5½@6c; white, 6½@7c. Beeswax, 30@32c. H. R. WRIGHT.

CINCINNATI, June 15.—The demand for honey is slow for this season of the year, which is due to the vast quantities that were held over from last season, and the importation of Cuban honey. We quote amber in barrels and cans at 5¼@6½c; white clover, 6½@8c. Beeswax, 30c. THE FRED W. MUTH CO.

BOSTON, July 8.—Our market on honey, both comb and extracted is practically in a slumbering condition, as there is really no call whatever.

Prices remain as before quoted, but are really only nominal. BLAKE, SCOTT & LEE.

KANSAS CITY, June 25.—The market is about cleaned up on old honey, and there is very little demand at present. There are a few cases of new honey coming, which are being offered at $3.00 per case. No. 1 stock and amber at a little less. There is a great deal of old extracted on the market which is very slow sale.

Beeswax in good demand at 30c.

C. C. CLEMONS & CO.

NEW YORK, June 21.—Very little demand for comb honey. Some trade for No. 1 and fancy white, at from 12@13c, while dark and amber are almost unsalable. Extracted is in fair demand, although prices are irregular. We quote from 5@6½c, according to quality. Southern in barrels, at from 50@55c per gallon.

Beeswax more plentiful and prices are gradually declining. We quote 28@29c.

HILDRETH & SEGELKEN.

PHILADELPHIA, July 8.—There is little or no call for comb honey and no sales being made, with some offers of new crop at varying prices. There has been a big lot of extracted honey carried over, enough to carry through the season if no more was produced this season, from from the present outlook. We quote fancy extracted, white, 7@7½c; amber, 6c; Southern, 5½c. Beeswax lower—28c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

SAN FRANCISCO, July 6.—White comb, 1-lb. sections, 12½@13c; amber, 9@11c. Extracted, white, 5½@6c; light amber, 5@5½c; amber, 4@4½c; dark amber, 3¼@3¾c. Beeswax, good to choice, light, 28@30c; dark, 26@27½c.

New crop is on market in moderate quantities, mostly from the Sacramento and San Joaquin valleys. In a small way slightly higher figures than are warranted as wholesale quotations are being realized. Offering of new up to date have been mainly amber grades.

HONEY AND BEESWAX
When consigning, buying or selling, consult
R. A. BURNETT & CO.,
199 SOUTH WATER ST. CHICAGO, ILL.

WANTED! FANCY COMB HONEY
In no-drip shipping-cases. Also Amber Extracted in barrels or cans. Quote your best price delivered Cincinnati. The Fred W. Muth Co.
32Atf Front and Walnut, CINCINNATI, OHIO.
Please mention Bee Journal when writing.

PERFECT GOODS!
LOW PRICES!

A Customer Once, a Customer Always.
We manufacture

BEE-SUPPLIES
OF ALL KINDS.
(Been at it over 20 years.)

It is always BEST to buy of the makers.
New Illustrated Catalog Free.

For nearly 14 years we have published

The American Bee-Keeper
(Monthly, 50c a year.)

The best magazine for beginners, edited by one of the most experienced bee-keepers in America. Sample copy free.
Address,

The W. T. FALCONER MFG. COMPANY
JAMESTOWN, N. Y.

W. M. Gerrish, Epping, N. H., carries a full line of our goods at Catalog prices. Order of him and save the freight.

Please mention Bee Journal when writing.

I. J. STRINGHAM, 105 Park Place,
NEW YORK

Manufactures and carries in stock every artice a bee-keeper uses. BEES AND QUEENS IN SEASON.
Apiaries—Glen Cove, L.I. Catalog free.

ST. LOUIS, 1904.

Bee-Keepers' Supplies Galore.
Catalog Free.
A No. 1 Smoker by mail, $1.

Bees, Honey and Beeswax bought and sold for cash.

LEAHY MFG. CO.,
1 ALTA SITA, EAST ST. LOUIS, ILL.

Rush Orders

Are pouring in, but we are filling them (almost every single one) within a few hours after they are received. We can ship

Sections, Comb Foundation, and Dovetailed Hives
UPON RECEIPT of ORDER
in regular packages.
Open Day and Night.
Shipping Facilities Unequaled Anywhere.

G.M.Scott&Co. 1004 East Washington St.
INDIANAPOLIS, IND.

Please mention Bee Journal when writing.

The Demand for
Moore's Strain of Italians

becomes greater each year. The following report shows the reason why:

EXCEL IN STORING CAPACITY.

B. S. Taylor, a large honey-producer of Perris, Cal., who sent me an order for 75 queens at one time, says:

"I have a large apiary mostly of your stock, and I have never, in my 30 years' experience, seen so quiet and gentle bees to handle, and in storing capacity they excel anything I have ever had."

Untested Queens, 75c each; six, $4.00; dozen, $7.50. Select Untested, $1.00 each; six, $5.00; dozen, $9.00.

Safe arrival and satisfaction guaranteed. Descriptive circular free.

I am now filling orders by return mail, and shall probably be able to do so till the close of the season.

J. P. MOORE,
27Atf MORGAN, PENDLETON CO., KY.

Please mention Bee Journal when writing.

27th Year **Dadant's Foundation** 27th Year

We Guarantee Satisfaction. What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS. PATENT WEED-PROCESS SHEETING.

Why does it sell so well? Because it has always given better satisfaction than any other. Because in 26 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material.
We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies
OF ALL KINDS.

Langstroth on the Honey-Bee—Revised
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

DADANT & SON, Hamilton, Hancock Co., Ill.

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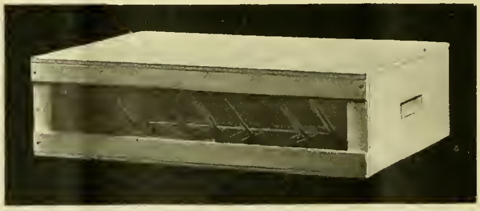
DON'T RUN THE RISK
Of Having to Wait for
Sections and Shipping-Cases.
Send to Us and
Get the Best, and Get it Quick.



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U. S. A.

LEWIS
WATERTOWN, WIS.
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Management for Comb Honey.
S. T. PETTIT.

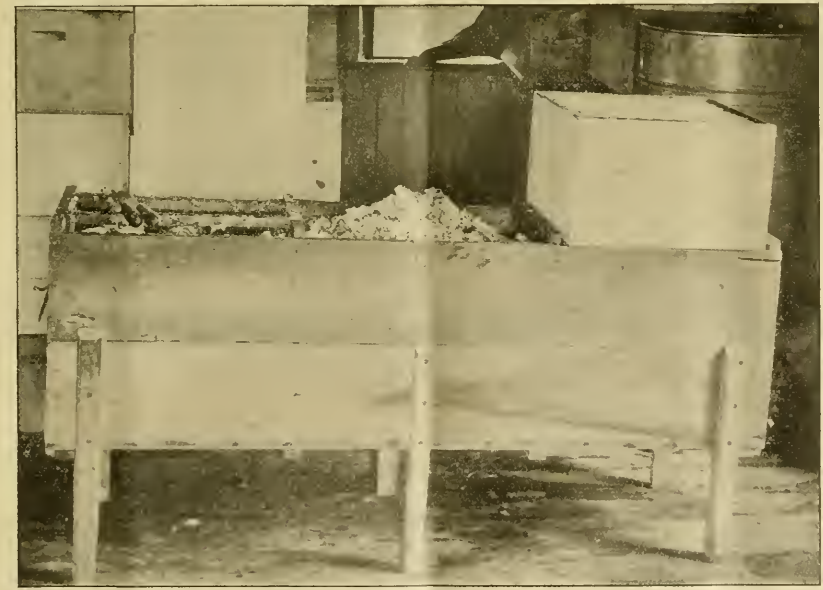
Robber-Guard and Entrance-Contractor.
"VIRGINIA BEE-KEEPER."

AMERICAN BEE JOURNAL

WEEKLY—$1.00 A YEAR.

Published by GEORGE W. YORK & CO., 334 Dearborn Street.

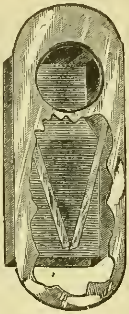
44th Year. CHICAGO, ILL., JULY 28, 1904. No. 30.



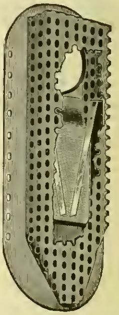
A CHEAP, HANDY, ROOMY UNCAPPING-BOX BELONGING TO H. G. SIBBALD, OF ONTARIO, CANADA.

(See page 517.)

SEASONABLE GOODS.



Porter Bee-Escapes.



Spring Escapes.—For clearing the super of bees before taking off the sections. A great labor-saver. No shaking of heavy supers and excessive smoking. No stinging and robbing. Just tip up the super and insert the board. Next morning the super is free from bees and can be removed. We have tested all forms of escapes and find the Porter by far the best.

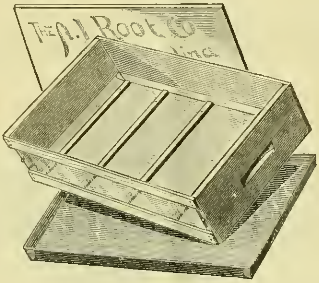
Price, 20c each; $2.25 per doz., prepaid. Price, with board, 35c; $3.20 for 10, not postpaid.

House Escapes.—No extracting-house is complete without these escapes. They allow the bees to pass out and it is impossible to return. See that your windows and doors are fitted with them and you won't be worried with robbers. This escape is used to place on top of a pile of supers when such a method is used in clearing supers.

Price, 25c each; $2.75 per doz., postpaid.

No-Drip Cases...

Don't allow your honey to be sold at low prices on account of poor shipping-cases. Put your crop in Root's No-Drip Cases and it will reach the market in perfect condition, thus bringing satisfactory returns. The cases are made of selected basswood with 2 or 3 inch glass front which show off the honey to the very best advantage.


The A. I. Root Co
Medina

PRICES.

NO-DRIP SHIPPING-CASES. NAME AND SIZE OF CASE.	Nailed, each.	Complete, including 3-inch glass 1 side, nails and paper, in flat. 1	10	100
12-in. 4-row for 4¼ s'n	30	25	2 00	$18 00
10-in. 4-row "	30	25	2 00	17 00
12-in. 2-row "	20	15	1 30	11 00
10-in. 2-row "	20	15	1 20	10 50
16-in. 2-row "	25	18	1 50	12 00
8-in. 3-row "	20	15	1 30	11 50
6¼-in. 3-row "	20	15	1 20	11 00
7⅛-in. 4-row for 4x5	30	22	1 80	16 00
7⅛-in. 3-row "	25	20	1 40	12 00
9¼-in. 4-row for 3⅝x5	30	22	1 80	16 00
6¼-in. 3 row "	25	20	1 40	11 50

Send to us or to any of our branch houses for general catalog. It gives full prices and description of Cartons, Glass Jars, Tin Cans, etc. In fact, everything needed by the bee-keeper. Remember you can get Root's Goods near at home and save freight.

THE A. I. ROOT COMPANY,

Factory and Executive Office:

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Chicago, Ill., 144 East Erie Street.
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AMERICAN BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor. CHICAGO, ILL., JULY 28, 1904. Vol. XLIV—No. 30.

Editorial Comments

Working Up the Home Market.

General Manager N. E. France, in his home city of 3500 people, disposes annually of about 14,000 pounds of extracted and 700 pounds of comb honey. This is done through the stores, at a commission of 10 percent for cash, or an even swap without any commission where goods are taken. The price of extracted has been 10 cents a pound, cost of package added, but for the past two years the price has been 8 cents. The trade is mostly in 2 and 3 pound friction-top tin cans, though farmers take larger packages. This is the way Mr. France says, in the Bee-Keepers' Review, that he worked up the trade:

> Just 30 years ago we sold comb honey, in large boxes, at 25 cents per pound. We then got our first extractor. I wrote short articles for our local papers, telling how the honey was extracted, and how much better it was than the old-fashioned strained honey mixed with bee-bread and other foreign material. At public gatherings, in the city park, I took combs of honey, the extractor and uncapping-knife, in the band-stand where all could see the honey extracted. Then I passed around the combs, also the honey in my nicely labeled pails with a spoon to sample it with. I was careful to advertise that such honey was for sale in every produce store in the city, at *the same price as I there sold it.*
>
> Sometimes, if sales were not as good as usual, we would take the light wagon with a barrel of nice honey, the barrel fitted with a faucet, and scales to weigh with, and peddle out one or two barrels, taking special pains to inform customers that they could get more like it at any time in nearly any store in the city, and *at the same price*—10 cents per pound.

Book-Learning vs. Experience in Bee-Keeping.

The man who attempts to become a bee-keeper by studying bee-books and bee-papers without ever touching a hive is not likely to be a brilliant success. Knowledge gained by actual experience is likely to be worth more than that gained from books. There are those whose knowledge of bee-keeping has come almost entirely from personal observation and experience, who have never felt the need of studying bee-keeping from a book, and who say, "I take no bee-paper, because experience is better than book-learning."

While all of this is true, it is one of those half-truths that, stopping short of the whole truth, is equivalent to a grievous error. It is true that the man who has gained a certain amount of knowledge from experience is better off than the man who has gained the same amount of knowledge from reading. It is also true that Jones, who has gained all the knowledge possible to be gained from reading, is not so well off as Smith, who has gained that same knowledge from actual experience. But Jones is a possibility, while Smith is an utter impossibility. Smith can never go beyond the experience of a single lifetime, while Jones has the result of the experience that reaches back through many generations. Not only that, but he has within his reach the rich accumulations of the experiences of many lives during each of those many generations.

For, after all, the teachings of the books and journals are merely the results of the experience of others, and next to getting knowledge from our own experience comes being told the experience of others.

Besides, the well-read man has all the opportunity for personal experience that the man has who reads nothing. His experience, however, is based on the accumulated wisdom of all that have gone before him, while the unread man begins back just where his ancestors began hundreds of years ago. A few evenings devoted to the study of a single book will give a man more information than he can gain from actual experience in a long lifetime. The book will cost him little more than a dollar, while the knowledge gained without it will cost him in blunders and failures many dollars.

Next in value to the investment of money in a bee-book and a bee-paper is the investment in another bee-book and and another bee-paper.

"Advantages of Late-Reared Queens."

Editor Hutchinson has this to say in the July Bee-Keepers' Review concerning requeening colonies in the fall, or after the honey season is ended, enumerating the advantages connected with the practice:

> So many times there comes to the bee-journal editor the query: "When is the best time to buy and introduce queens?" Many seem to have an idea that the spring is the best time to do this work. Unless there was some special reason for doing otherwise, I should always buy and introduce queens in the fall. In the first place, queens are scarce in the spring and prices are high. Next, if there is a failure to introduce, and the bees get the brood-nest overloaded with honey, and there is a break in brood-rearing for a week or ten days, the colony is practically useless for the clover honey harvest. Again, early in the season, unless it is *very* early, the colony is populous, combs full of brood, and everything is booming. The bee-keeper is busy, or ought to be, and it is not "good business" to be tearing up, and disturbing, and throwing out of equilibrium, a colony just on the eve of a honey harvest.
>
> Queens reared after the honey season is over are every whit as good as any queens, if the breeder understands his business, and attends to it. It is just possible that they may be less inclined to swarm. The hurry of the season is over, and the bee-keeper has more time to attend to the business of introducing queens. If there is a failure to in-

troduce, there will be no consequent loss of a honey crop. Still further, the queen that is introduced, being a young queen, will lay later in the season than will an old queen, and, as a result, the colony will go into winter with a larger proportion of young bees.

And now for the last and best point: The queen will be young and vigorous the next spring, and will push her colony ahead in a way that is seldom seen with an old queen.

If you have never tried it, do it this fall. Introduce some really good young queens that have just begun to lay, and see how the colonies will winter, come through the spring, and boom ahead of all others.

We would refer our readers to the advertising columns of this journal for offers of queens. We believe they are all reliable, else we would not allow them to advertise in the American Bee Journal.

Speed of Birds and Bees.

The St. Joseph News and Press reports that W. W. Murphy, an engineer on a Burlington fast express, has been gauging the speed of various winged creatures by watching their flight as they accompanied his train. A pigeon easily makes 46 miles an hour. A chicken-hawk and a crow can make 24 miles an hour; the blackbird, dove, robin, and other small birds, 38 miles an hour.

"Murphy says that a honey-bee, the other day, flew in and out of his cab window while he was going at the rate of 63 miles an hour. The performance lasted while the engine traveled a half mile."

Yet that might not mean that a bee can fly 63 miles an hour, for the air of the cab would be moving more or less with the cab, carrying the bee with it. On the other hand, the bee might be going more than 63 miles an hour, for it was not flying in a straight line, its zigzag course as it flew in and out of the cab increasing the distance traversed.

Phacelia for Honey and Fodder.

There is probably not the slightest doubt that Phacelia tanacetifolia is a fine honey-plant. It is having quite a boom in European countries, having been introduced there from California. Testimony in foreign journals conflicts as to its value for fodder, making it somewhat problematical whether indeed it has any great value in that direction, without which it can little be counted on for honey, as the cultivation of any one plant for honey alone can probably never be made profitable. Absolutely nothing has been said about it as a forage plant in this country in the bee-papers, until the following from Otto Luhdorf, a Californian, in Gleanings in Bee-Culture:

> This plant is very good for fodder and honey in the Northern States, where alfalfa can not be grown to advantage. Alfalfa has many advantages over phacelia. Alfalfa is perennial; can be cut from three to six times a year, and brings each time from 1 to 1½ tons of hay per acre. Alfalfa, even if cut late, will still make fine hay.
>
> Phacelia is an annual, and it can be cut only once or twice in the same year. The first time it should be cut for hay, just when commencing to bloom fully, giving the bees about one week's time to work for honey. If the season brings moisture in sufficient quantities, as is general in the Northern States, I believe it will bring a second cut, which may be used for honey and seed. I have not tried it here, especially for such a second crop, as we have not sufficient moisture in this country, but I have seen it produce new growth near ditches, where I had cut off some for experiment, and this new growth produced again flowers and seed. Phacelia will make fine hay for all kinds of stock, if cut not too late, say when blooming about from one to two weeks.
>
> If a country is suitable for alfalfa, this fodder will bring much larger returns than phacelia.

See **Langstroth Book Offer** on another page of this copy of the American Bee Journal.

Miscellaneous Items

"Modern Queen-Rearing" and "How to Produce Extracted Honey" are the names of two 32-page illustrated pamphlets recently issued by The A. I. Root Co., at 15 cents each. Orders may be sent to the office of the American Bee Journal at the price named.

* * *

P. J. England, of Fancy Prairie, Ill., the first president of the Illinois State Bee-Keepers' Association, died July 14, of typhoid fever, after a short illness. He is survived by his widow, six daughters and two sons. From a letter received from one of his sons, Mr. Arthur J. England, we take the following, which shows the high character of Mr. England:

> "My father was a consistent Christian, and a kind, loving husband and father. For a number of years he had not been extensively engaged in bee-culture, but he never lost interest in the pursuit."

* * *

"Texas Almanac and State Industrial Guide for 1904," is the title of a 25-cent pamphlet of over 400 pages, giving a comprehensive description of the counties of Texas, their resources and products; specially prepared and illustrated articles on the various industries and pursuits of the State; directory of associations, institutions, etc., for ready reference. Mr. Louis H. Scholl, secretary of the Texas State Bee-Keepers' Association, contributed the part referring to bees and bee-keeping. It is published by A. H. Belo & Co., Dallas, Tex. Every Texan, and every one else who desires to know all about Texas, should have a copy of this pamphlet.

* * *

These Reviewlets are taken from the July number of the Bee-Keepers' Review:

> Elmore M. Hunt and wife, of Bell Branch, Mich , are rejoicing over their first baby—a girl.
>
> Dr. C. L. Parker, a well-known bee-keeper of Syracuse, N. Y., is dead. He was the one with whom Irving Kenyon took his first lessons, as mentioned recently in the Review.
>
> "All things come to him who waits," is an old saying with which I never felt entirely satisfied. It is all right to wait if necessary, but there must be something more. Here is the way that Thos. A. Edison puts it, and it adds the one thing needful. He says, "All things come to him who hustles while he waits."

* * *

The Pennsylvania Association, as announced on page 344, was organized April 12. Secretary D. L. Woods, of Muncy, Pa., sends us the following statement:

> The chief purpose of the Pennsylvania State Bee-Keepers' Association is to promote apiculture in Pennsylvania, and it is to be accomplished by efforts made along the following lines:
>
> 1. To secure legislation for the promotion of bee-keeping.
> 2. To suppress the diseases of bees, especially foul brood, by legislation and by the appointment of a competent State Inspector with deputies or assistants.
> 3. To secure and promote instruction in bee-keeping at Farmers' Institutes.
> 4. To secure a series of lectures at the normal session for Farmers' Institute Lecturers to be held in Bellefonte next October.
> 5. To make it possible for persons to obtain instruction in apiculture at the Pennsylvania State College.
> 6. To induce and promote investigation and experimentation in apiculture at the Pennsylvania State Agricultural Experiment Station.
> 7. To induce and promote investigations and publications by the Division of Zoology of the Pennsylvania State Department of Agriculture.

8. To enforce the laws against the adulteration of honey.
9. To secure laws against spraying fruit-trees while in bloom.
10. To obtain statistics concerning bees and bee-products within our State.
11. To enter upon a crusade of apicultural education in this State, both for producers and consumers of honey.
12. To instruct fruit-growers and farmers as to the practical value of bees as fertilizing agents for their plants, and to show the fact that they are wholly beneficial and never injurious
13. To raise the rank of Pennsylvania as a honey-producing State from fourth in the Union to first, if possible.
14. To band together all the bee-keepers of the State for the purpose of good fellowship, and that strength which is to be obtained only by union.
15. To make it possible for all persons who are not now keeping bees to add to their revenues by the production of honey, and to increase both the quantity and quality of the honey produced in this State.

The Association desires the name and address of every man in the State who has one or more colonies of bees, and for this purpose invites persons to correspond with the Secretary, stating the number of colonies kept, and giving statistics as to the amount of honey and wax produced each year. The membership fee is only one dollar per year, which also entitles the individual to membership in the National Bee-Keepers' Association, and gives him special protection and assistance at any time that it may be required. For example: If a member of the National Association becomes involved in litigation, the National Association will furnish expert testimony and counsel such as may be necessary to secure equity in the courts of justice.

This commendable undertaking should receive a large membership, and all persons interested are invited to send their names, addresses and fees to the secretary, and these will be registered and receipted.

The next meeting will be held in Harrisburg during the first week of December, when several papers will be presented by practical and expert men bearing upon the various problems of the bee-culturists in Pennsylvania.

* * *

The Uncapping-Box, shown on the first page this week, is thus described in the Bee-Keepers' Review by its owner, Mr. H. G. Sibbald, one of Canada's successful bee-keepers:

> A convenient and roomy uncapping-box that will hold the cappings from three or four thousand pounds of honey is a boon to any bee-keeper in the busy season. The one shown is easily made, and fills the need very well.
>
> It is 5 feet long, 16 inches wide, and is made in two sections, each 9 or 10 inches deep. The lower section is for honey, and, with the exception that the corners of the side-boards are halved together, it is simply a well-nailed and neatly-made box, waxed inside at all joints, with a tap at one end to draw off honey; the legs being a little shorter at the end having the tap, so that the honey will run off readily. The top half or section is made the same way, only that, instead of a board bottom, it has a nice screen bottom which allows the honey to drain from the cappings. Two small pieces, 2½x⅞ inches, are used for braces to strengthen this top; and between the left hand one and the end are two strips about 1x¾ inches, to rest the comb on while uncapping. The two spaces to the right, between the braces, are used to set the super of combs on while uncapping, and after uncapping, any drip will then be caught. The bottom section is halved on the inside edge; the top halved on the outside edge, so as to fit the inside so that it can not leak. H. G. Sibbald.

"**The Hum of the Bees** in the Apple-Tree Bloom" is the name of the finest bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us *one new* yearly subscription to the American Bee Journal at $1.00.

Some Expert Opinion

"In the multitude of counsellors there is safety."—Bible.

Proper Distance for Frame-Spacing.

11.—*(a) What distance are your frames spaced from center to center?*
(b) If you were starting anew, what distance would you space them?
(c) What are your reasons for your preference for either distance?

N. E. France (Wis.)—a. 1½ inches in brood-chamber; 1¾ for surplus combs.

J. M. Hambaugh (Calif.)—a. From 1⅜ to 1½ inches from center to center. b. I have no desire to change.

G. M. Doolittle (N. Y.)—a. 1½ inches. b. 1½ inches. c. Because the bees so space when building comb without being manipulated by man.

Prof. A. J. Cook (Calif.)—a. 1⅜ inches. b. 1⅜ inches. c. It is enough, is compact, protects brood best, and all superfluous space is to be avoided.

C. P. Dadant (Ill.)—a. 1½ inches. b. Same, or very little less. c. The combs are easier to handle, being as fully spaced as the bees will allow.

C. H. Dibbern (Ill.)—a. 1⅜ inches. b. I would not change it. c. That seems to be just what the bees would space them were no frames given them.

Mrs. J. M. Null (Mo.)—a. I don't stop to measure distance; simply use the eye and touch to determine the space, making it a close bee-space. b. I don't want bulged combs.

Dr. J. P. H. Brown (Ga.)—a. About 1 7-16 inches. b. I would not change. c. This distance approximates nearest to the septa of the combs as constructed by the bees.

E. Whitcomb (Nebr.)—a. 1½ inches. b. About 1¼ inches. c. To have them of a standard width and to prevent their being heavy and bunglesome for handling or extracting.

O. O. Poppleton (Fla.)—a. 1⅜ inches. b. The same. c. This seems the right distance for best results in brood-rearing, and can readily be increased for honey-storing, if thought best.

P. H. Elwood (N. Y.)—a. 1½ inches. b. 1⅜ inches. c. With our frames, any accumulation of propolis increases the distance, and I believe 1⅜ is enough for brood. For extracting, 1½ is all right.

S. T. Pettit (Ont.)—a. 1⅜ inches. b. 1⅜ inches. c. When left to the bees that is their choice. Anything less hastens swarming; anything more is a waste of room and heat just when we want all the heat possible.

Jas. A. Stone (Ill.)—a. 1 7-16 inches. b. I do not know any reason for making a change. c. Supposing this is the distance that brood requires, a greater distance would be wasted space, for the bees will accommodate themselves to the space.

Eugene Secor (Iowa)—a. 1½ inches. b. Same. c. I believe that to be about right where brood is reared and honey all stored in the same combs. There is more room to cluster in winter than if spaced closer. The frames are easily removed.

G. W. Demaree (Ky.)—a. My frames are spaced the regular Langstroth distance apart—1⅜ from center to center of the frames, when the combs are being constructed by the bees. b. If I were starting anew I would make no change. c. My reasons are: Close spacing at the start gives me straight, well-constructed combs to start with, and as my frames are "movable," I can widen the spaces between the combs by removing one of the frames, and re-spacing the others. This plan enables me to accommodate the varying conditions of the inmates of the hive.

R. L. Taylor (Mich.)—a. 1⅜ inches. b. The same. c. 1⅜ inches is about the distance preferred by the bees. If further apart less brood could be covered by the bees in cold weather, and if naturally closer there would be evident inconvenience often, unless the combs were very true.

Dr. C. C. Miller (Ill.)—a. 1⅜, except as propolis makes it a little more. b. Probably 1⅜. c. That distance, or a little more, seems to be the distance used by the bees when left to themselves. It's easier to get hives and frames for that distance, and I don't know of any objection.

C. Davenport (Minn.)—I do not pay much attention to this. The larger part of my hives are the 8-frame dovetailed, and some of them have a division-board, and many of them have not the 8 frames occupying the whole space. So far as practical results are concerned, I do not see any difference.

Rev. M. Mahin (Ind.)—a. 1½ inches. They are loose frames, and I regulate the distance by sight and feeling, generally using my fingers to determine the distance between the frames. b. I would not make any change. c. I find that to be about the average distance the bees build their combs when left to themselves.

Adrian Getaz (Tenn.)—a. Some 1⅜ inches and some 1½ inches. b. 1½ inches, or nearly so. c. Easier handling. Possibility of pushing the frames a little closer when queen-cages are to be kept betwen two of the frames, which are then farther apart than usual. More space between the combs, thus giving room for a more compact cluster during the winter.

James A. Green (Colo.)—a. 1⅜ inches. b. The same. c. Because I believe this distance suits the bees best. I hope no one will be misled by those who advocate a much closer spacing. I once made a lot of hives in which the frames (fixed distance) were about 1¼ inches apart. They were no better in any way, and the bees wintered much worse than in similar hives with wider spacing.

L. Stachelhausen (Tex.)—a. 1½ inches. b. The same distance, 1½ inches. c. If a swarm of bees builds the first two combs in a natural state, these combs have a distance from center to center of 34.5 mm.; that is somewhat over 1⅓ inches. Combs which are started later from the same swarm are distanced a little farther apart. This is proof enough that this larger distance is no hindrance for the bees. Combs distanced 1½ inches are easier to handle that closer distanced.

E. S. Lovesy (Utah)—I am not very particular about the distance from center to center. I use Hoffman self-spacers, about 1⅜ inches, and as my hives are 16 inches, outside measurement, I usually put 10 frames in the brood-chamber; but when I put in frames that have been used before, I often fill up with 9, and I note little or no difference as to results, only in wintering I prefer 9 to 10 frames. In the super or top box I fill up with 8 or 9 frames, the less frames the more honey, as the bees build them thicker and heavier.

E. D. Townsend (Mich.)—a. 1⅜ inches for the brood-chamber, and 1¾ for the upper stories. b. We are building all our new hives as above, and see no reason for a change. c. 1⅜ inches is about as close spacing as is practical to have in the brood-chamber. There are many reasons why anything wider is worse than useless. We use 8 frames in a 10-frame upper story to extract from, then run the uncapping knife deep, uncapping the whole side of a Langstroth frame at one stroke, holding the comb in such a position that the cappings fall direct into the uncapping tank, *not back on the comb.* Then you get more wax without any apparent loss of honey. Thick combs uncap much faster than thin ones; then there is 20 percent less to uncap to get the same amount of honey.

Contributed Articles

Best Management for Section Honey.

BY S. T. PETTIT.

On page 439 Dr. Miller gives a friendly criticism and defends his method of taking comb honey. Criticising, he says: "But the total trend is toward the advice that in no case should the supers of sections be removed till all sections are completely finished, so long as the harvest continues."

My own advice is, that in no case should the supers of sections be removed so long as the white honey harvest continues, and then they should come off, finished or unfinished. And I am fully convinced that my method will have as few unfinished sections as any practice known to the profession, and I and the bees are spared that sore trial of overhauling and removing sections during the honey-flow.

You say, Doctor, "If I had followed such advice last year I think it would be a moderate estimate to say that the loss would have been $100." Probably you are right, but your fixtures are (pardon me, for I must say it) not what I think are the best. My supers hold 36 4¼x4¼ sections, and most of the bees go up the sides and near the rear end of the hive, and are made comfortable at the sides by the use of dividers, and the *congested condition of the centers of your hives and supers is abated in mine.* (More about dividers at some future time.)

Any unfinished sections from the previous year I put next to the super walls; you put them in the center. I want the bees evenly distributed throughout the supers; I aim at relieving that undesirable crowding of the center of the hive and supers which causes, among other evils, travel-stained sections. Of course, I must have strong colonies for my system.

Another thing, in your practice, with which I can not agree, is putting new sections on top of sections instead of under them. To work on these the bees must travel over the partly finished sections, and we know what will happen to them in that case. Farther along you say: "Soon after that the white surface begins to be darkened—at least that is the way it is here—probably caused by the bees bringing up bits of black from the brood-chamber below." Thank you, my good friend, for that cheerful confession, that the ⅞ of an inch deep top-bars doesn't cure all the ills claimed for it. But, after all, I don't think the bees go below for old wax, so long as their sacs are full of new honey; but if they do, then let's adopt thin top-bars and excluders. You may count on it that the drones help to destroy whiteness of sections.

I am glad, Doctor, that you admit that honey will be of better body if left on for considerable time after being capped; that a section of honey taken from the hive during a rapid flow, just as soon as it is sealed, unless properly managed afterward, is in some danger of becoming watery in appearance; that the honey itself is the better for remaining for some time on the hive. What a severe condemnation of your own practice. It is the "body"—the flavor, the aroma, the keeping quality, the eating quality that makes honey the much-prized luxury that it is. It is a bad trade to impair or injure any of these for snowy whiteness. All the whiteness that the trade calls for can be had without in any way sacrificing quality.

I am willing to admit that some of the whiteness will be lost by leaving the sections on until the honey is thoroughly ripened and the *surface* of the cappings finished—made practically air-tight.

Another thing, I believe that decreasing the room in the hive during the honey-flow by removing sections, causes a tendency to swarm, and also to travel-stain the remaining sections—sets up a general discontentment.

We should not lose sight of the fact that bee-keepers are, without any profit to themselves or to their patrons, educating the public to demand what they do not adequately pay for. Through our exhibitions and otherwise, we have taught—some at least—to expect a section with scarcely the appearance of a pop-hole; that every last cell must be sealed fast to the wood; that extracted honey must be served to customers in the liquid form; that tall sections are "away out of sight" ahead of the standard 4¼x4¼ sections; and now, my good friend, Dr. Miller, is making a fad of snowy whiteness. And we are saddling ourselves with all these uncalled for fads. And in the end no more honey will be sold, nor will we get any more money. I hold to putting the very best goods possible upon the market, but it is, in my judgment, unwise to create a demand for an article that tends to injury, and can be of but temporary gain and no real benefit to any one. No one has a patent on any of these fads, and if many adopt them, what then?

To my mind there is, though perhaps unconsciously, a little guile in it all. The tall section, though it weighs no more, seems to; and so the customer pays more for it. The snow-white section is supposed, by the unsuspecting customer, to be of superior quality, but in truth it is of inferior quality to the well-ripened honey covered by *finished-sealed* cappings.

Perhaps I ought to ask pardon, but then we are Bible readers and Christians. Saint Paul says: "Abstain from all appearance of evil."—I. Thes. 5:22. But the practices referred to are too cute even to have the appearance of evil.

No one is at liberty to interpret the above as charging any one with dishonest motives. What I wish to say is, that any one may inadvertently wrong himself or another. It is much easier to err than to correct an error.

Ontario, Canada.

A Robber-Guard and Entrance-Contractor.

BY "A BEE-KEEPER IN VIRGINIA."

I SEND drawings and descriptions of an appliance that I have found very useful, and that any one who can put a hive together can make. I claim no originality for it, though I have never seen anything of the kind in use, or advertised for sale. I call it the "Combined Robber-Guard and Winter Entrance-Contractor."

Fig. 1 shows the central portion of the entrance-contractor with robber-guard in position. (Outline part is the contractor, and shaded part the guard.) This is how it ordinarily appears from the front of the hive.

Fig. 2 shows the same except this is its appearance from the rear or inside of the hive, ordinarily.

In very bad cases of robbing, where the despoiled colon seems disinclined or unable to put up any defense, the robber-guard may be used with the rear part of the front, thus leaving only one bee-space for the robbers to enter, while five or six bees can defend the entrance from the inside.

Fig. 3 shows the entrance-contractor as used in winter; the opening can be any size desired, the robber-guard being, of course, cut to fit the opening accurately.

Fig. 4 shows the robber-guard slightly enlarged and on its back. It is fastened in the contractor with two very small nails, and is easily pried out or pressed in with the fingers.

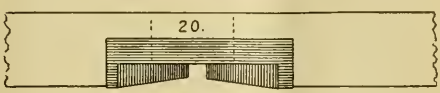

Fig. 1. Front

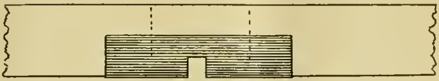

Fig. 2. Back

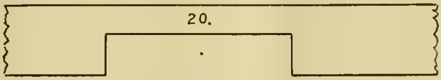

Fig. 3.

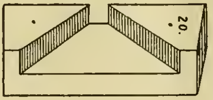

Fig. 4.

Combined Robber-Guard and Winter-Entrance Contractor.

All entrance-contractors and robber-guards are numbered and cut to fit the hive of the same number, as I find almost every hive varies slightly in both the length and depth of its opening. I have one of these for every hive, all painted white, and they can be put in position on any hive, or hives, as desired, in a few seconds.

In winter the robber-guards are taken out, and the contractors remain on until the approach of warm weather.

Augusta Co., Va.

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we have used it ourselves.

PRICES, prepaid—Sample copy free; 10 for 20 cts.; 25 for 40 cts.; 50 for 70 cts.; 100 for $1.25; 250 for $2.25; 500 for $4.00; 1000 for $7.50. Your business card printed free at the bottom of the front page, on all orders for 100 or more copies. Send all orders to the Bee Journal office

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Ordering Bee-Supplies—Forced Swarming.

Dear Miss Wilson:—There is another side to that taken by the Editor, in his comment on "Early Ordering of Bee-Supplies," on page 451. May I give my experience?

I got my bees late in 1902, all in box-hives. So last year was my first of practical bee-keeping.

First, I wanted to transfer them to new hives, and as I was told that transferred bees would not swarm the first year, I got a new dovetailed hive for each colony, and five over for luck. The first one I tried on the "Heddon short method," got the queen and bees in finely, and they all absconded. Then I tried another plan, that of putting the old hive over the top of a new one, the frames of the latter filled with full sheets of foundation, and I was told that the bees would fill it up, and the queen would go down. Would they? The whole lot of them were bent on swarming *out*. Every one I tried ignored the bottom story entirely, and most of them swarmed straight through twice, and one three times. By this time last year I had hived 19 swarms, and I, the novice, was "out of supplies." The dealer was "out," so were the bees! Though "trying," it is not quite "heart-rending," for fortunately I had a number of extra frames, so I made several temporary hives from old boxes (the 10-gallon oil-can, turned on its side, is just the size), nailed a strip of wood at each end to hang the frames on, and when a month later a car-load of supplies came to the relief of unhappy beedom, all I had to do was to lift the frames and bees into permanent homes.

Only one colony did not swarm, and that stored about 170 pounds of honey.

But this year I was not going to be caught.

After uniting several small colonies in the fall, and losing 2 in the winter, I began this year with 25, 5 still in box-hives, as I got my last supplies too late to transfer them, but I had hives ready for them. But I did not wait for spring count; as early as February I ordered all I thought I would need in the way of supplies, and they were not delivered until the last week in May, just two days before a neighbor hived a fine swarm.

I got the hives made up as quickly as possible, painted them, wired the frames and put in foundation, set them up, and sat down under the trees to wait for swarms. I am waiting still! So is a nice row of empty hives! Only one colony has swarmed from the box-hive colonies which failed to do so last season. Of the remaining box-hive colonies one was found queenless, so I united it early, and the other 3 I have transferred, making from them 2 extra colonies, and that is all my increase. Now, how would the Editor advise me to calculate for next year?

I have been most carefully over the remaining 20 within the last few days, and in each there is unbroken continuity of brood from eggs and tiny larvæ to young bees that "hatch while you wait," which I think is proof that the old queens never left the hives and got past me. I know Dr. Miller would think this state of things ideal, but I don't, as I wanted natural increase.

However, if the bees won't I will, so on Monday I sent away for an Italian queen, and set myself to study Dr. Miller's methods of making artificial increase, in his "Forty Years Among the Bees."

After reading and calculating the time required, I am afraid that if I wait to rear all my own queens, it will be too late in the season to build up good colonies, so to-day I have sent away for 6 more queens.

I shall take advantage of Dr. Miller's 40 years of experience in making my colonies, but I shall be much obliged if you will kindly tell me, with queens that have been mailed, how soon after introducing I ought to find brood?

May I say something about the plan of making forced swarms through a bee-escape, which has been discussed in the American Bee Journal this month? I have tried it twice myself, for the last drive in transferring from box-hives, and for fear of suffocation, I raised the hive on a piece of an old wood separator. This gave a current of air without making a bee-space, and this week, when I tried it for the second time, I fixed up an old super with 4 escapes in it, and left it on for three days. But with me, however it is with "Maine," the plan is not satisfactory.

The field-bees went down, but the queen did not, and with her stayed all the young bees, and I had to drive and brush them all out in the old way. This led me, for a beginner, to have rather an exciting experience yesterday. As I brushed the last comb I saw the queen, caught her and put her on the alighting-board, but she ran up the side and I lost sight of her. However, I thought she was pretty sure to run in with the others, and so I left them to settle down. When I came back, in about 20 minutes, most of the bees were in, but right in the middle of the alighting-board was a ball of bees. "A balled queen"—I had never seen one before, and I was afraid they would suffocate her before I could get them off. I seized "Forty Years," which was lying on my chair, but the advice was only for balling *inside* the hive, so I ran up to the house with a vague idea I had read of dropping them into water. I came back with a pail of water in one hand and my "A B C of Bee-Culture" in the other, and after consulting the latter I decided to try the less heroic plan of smoking them first. A few gentle puffs and the top bees flew off, but the last were harder to move. They had the queen on her side, and were holding her down by her feet and wings. However, the queen herself struggled then, and in another moment was free, and I saw her enter the hive, where I hope she was safe.

With thanks for the many good things I have learned from your pages, I am,
Yours sincerely,
Delta County, July 8. Colorado.

In the excceedingly interesting account of your experience there is nothing to conflict with the very good advice given by the Editor, on page 451. You have learned by experience that nothing can be definitely known in advance as to the amount needed for any one season's supplies. So the only safe way to do is to order all that you think you can possibly need for the most favorable season, and if you do not need them they will keep until you do. In that case you will only be out the use of your money, and it is much better to have that empty row of hives waiting for occupants than to have the occupants waiting for the hives.

But it is not best to have foundation shipped in cold weather, on account of the danger of breakage.

Now as to the time you may expect queens to lay after introducing. There is a great variation. Sometimes a queen will lay in less than 24 hours after she is freed in the hive, and she may not lay in a week.

In regard to forced swarms through a bee-escape: You say the queen did not come down, and with her stayed all the young bees. To be sure, she did not come down, and never would, but would go on laying, and the bees would keep on hatching out. But on page 411 notice that "Maine" says: "Then after one day's flight so that all the old bees were below, or later, as the case might be, introduce the queen below." Which is another way of saying that after that length of time he took the queen from above and put her below.

It is not an unusual thing for bees, when excited, to ball their own queen for safety, and it is a pretty good plan to let them alone, and in nine cases out of ten she will not be hurt. Smoking a balled queen will free the queen providing the smoker be held far enough away. But *hot* smoke will pretty surely cause the bees to kill her.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

THE FAST-GROWING EUCALYPTUS.

A planted tree 4 feet in diameter and 150 feet high is pretty well for 25 years of growth even in California—6 feet a year vertically and 2 inches of diameter. Long live the eucalyptus! With cottonwood and eucalyptus some of southern California is now getting along better for fuel than some of northwest Ohio is. Just think of it once. How much better it is to exercise forethought and produce things than it is wantonly to destroy them! Page 422.

DARKENING AND GRANULATING SECTION HONEY.

Betsinger, at the Onondaga convention, let loose three ideas of decided interest. I'll change them to questions. Will jarring a white section make it look darker—by causing the honey to touch the front? Will old honey carried up from below cause the new honey it is mixed with to candy? A trifle of candied honey in the cells of an empty section—can it ever be got out so perfectly that the new honey put in it will not be stimulated to candy? Page 423.

SCIENTISTS AND FORMALDEHYDE.

People whom we have to call scientists are now very numerous, and it is written, "Many men of many minds." Doubtful if you could scare up a single doctrine so absurd but that some scientists would support it. 'Spects that we shall have to stick to the idea that formaldehyde is *itself* a destroyer of microscopic life until more than one scientist (and more than a few of them) say it isn't. No harm to suppose that formic acid is still more destructive. The main trouble with destroying vapors is to get them to penetrate where they are wanted; and that difficulty is not going to be overcome by letting them right loose to go away. Page 406.

IDEAS AT THE FOUNDATION OF THINGS.

All'ee same like me-digestive powers poor—is the field-working bee according to Robert West, of Jamaica experiment station. Leaves off nursing the brood and goes to work in the fields on that account. During a grand honey-flow is fed partly-digested food by the younger bees of better digestion. These are brilliant ideas, partly proven—ideas that go down to the foundation of things. Of course, they should be further tested and settled. As a more trifling matter we note positive evidence that drones in the hive do not *always* have to be fed. This will allow us to be a little more open to recent testimony that drones have been seen helping themselves to nectar from the flowers. Page 407.

ESCORT BEES AND INTRODUCING QUEENS.

Irving Long's plan of immediately removing the escort bees of a queen and substituting others from the hive to which she is to be introduced—I guess that's pretty certainly good as far as it goes. Whether it is worth enough to pay for the additional trouble I'm not so sure. Shouldn't wonder if it was. You see, if the lady is going to misbehave herself because she doesn't like the smell of her new subjects, it's much better for her to get through all that sort of thing in the cage, before a small audience too much frightened to resent it. Page 413.

WRONG KIND OF MAN AND THE BEE-KEEPING SISTER.

So just the wrong kind of man to marry her can make the bee-keeping sister more trouble than a whole lot of bees. Ho, hum, hum! I don't see how I can prove the contrary of that, and so I'll just let it stand. Page 409.

SULPHUR FOR MOTHS AND OTHER VERMIN.

A little while ago we heard how to sprinkle sulphur on the floor of a hive and keep away the moth from the combs in store there. Now we hear that sprinkling sulphur around the corncrib, and some over the corn, will keep rats and mice out. Natural inference that a similar sprinkling will of course keep the mice out of one's racks of empty extracting-combs. Why, O why, don't the Russians sprinkle a little sulphur over Manchuria, and drive all those troublesome Japs away? Page 395.

TAR-PAPERED WINTER-CASE FOR SUMMER AND WINTER.

Mr. Kilgore reports that his tar-paper which serves as roof for winter-cases, and then as substitute for roof to the hive proper in summer, has continued weather-proof four years. Pretty good. To make the winter-case serve as both shade-board and roof is quite an economy. Page 379.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal or to Dr. C. C. Miller, Marengo, Ill.

Bees Not Going Into The Super.

I have 3 colonies of bees that I purchased for pure Italians. When I received them last spring they were apparently in fine condition; they had each swarmed once, but have not even started to work in the supers. They do not seem to go up into the super at all, but seem to be working all right.

Is there anything I can do to help the matter? I have had but little experience, but I try to gain all the information I can from books and the American Bee Journal.

Illinois.

Answer.—That swarming would hinder super-work, especially if you did not put the swarm on the old stand. You can do something to hasten the start in supers by putting a bait-section in each super—a section containing some comb. Probably you have none, so you can give them something even better. Take a frame out of the hive, cut out a piece of brood an inch by three or four inches, and set it in the bottom of one of the center sections. That will bring them up into the super, sure, and whether they store any there depends on whether there is anything more to store than they can find room to store in the brood-chamber.

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Farm Bee-Keeping—Other Questions.

1. When a man keeps only a few colonies, in connection with his farm work, as I do, how can he get the most honey?

2. I had a colony the past spring that I noticed was not

working well. I overhauled them and found a very small, inferior queen, hardly as large as a small worker, with two or three small patches of brood. I destroyed the queen and ordered one; on its arrival I arranged to introduce her, and then discovered a large, nice-looking queen hidden in the entrance of the hive. What would you say the trouble was that those queens did not lay?

3. I had another colony that was a little weak. About the first of May I discovered the bees had commenced to rob it. I closed the hive and moved it into a new place, and had no more trouble of this kind. Several times afterwards I opened the hive and found a nice-looking queen with one or two patches of brood, perhaps three or four inches square; I thought she would build up in time, but to-day (July 2) I opened the hive again, and found the queen. All the brood had hatched and no signs of eggs or brood. Do you think the queen was injured at the time they attempted to rob the hive, or what is the trouble?

4. If I should give them a frame of brood will they rear a queen? and should the old queen be destroyed before giving the brood?

5. What would you do with such a colony?

MAINE.

ANSWERS.—1. Answering your question in the most general way, I should say to prevent after-swarming, so as to keep the force of the colony together for super-work. Of course, along with that should go the thousand and one things that are taught in the books of instruction on bee-keeping. If you have not one of these you are doing yourself a wrong. If there is any specific point in this connection upon which you desire further light, I shall be glad to try again.

2. Without knowing more particulars I can only guess that the small amount of brood present was all sealed, that the old queen had been absent for some time, and that the young queen you found the last time had not yet begun to lay.

3. It would be nothing strange that the queen should be injured in a robbing affray, but if there was present only one or two patches of brood three or four inches square shortly after the removal, it is likely the queen was poor in spite of her good looks.

4. The queen should be killed, and then the bees will rear a queen from young brood given them.

5. Do just what you have suggested, and in addition it would be well to give with the frame of brood the adhering bees, for they would be in better condition to feed the royal larvæ than bees that have had nothing to feed. Of course, if you had a queen, or a sealed queen-cell to give, that would be better.

What is a Good Honey-Yield?—Separators—Buckwheat—Price of Honey.

This is a wonderful honey-year in Missouri. White clover has been in bloom for two months, and will reach nearly three months of continued honey-flow.

1. What number of pounds of honey is considered good for one colony of bees to gather? My No. 1 colony will reach 156 pounds, with buckwheat just coming into bloom, and there were only 3 pints of bees in this hive April 23.

2. Do you approve of the separators in supers? I do not. I have two supers of honey before me now, just taken off, one with and one without the division-boards, and I find the bees have fastened the sections nearly all over to the board; and another thing, it is almost impossible to get all the young drones out, some of them having been sealed up inside, and I find it takes longer for the bees to fill up. I prefer one big room for the sections.

3. Is there any noticeable difference between the Italian and hybrid drones? If there is, then some of my hybrid drones are going in and out of the hive of Italians.

4. I have two kinds of buckwheat, one the silverhull and the other the Japanese, and I am going to time them, and see which bloom lasts the longer. How can I harvest and save the seed? I have no horse, and have only one acre, but it is very heavy. I want to put it up in sheaves, if I can, and expect to have to flail it out.

5. I am selling my comb honey at 15 cents per pound or two pounds for 25 cents. Should I sell it for any less? It is fine, and I use all the best factory bee-supplies.

6. Do bees have honey and pollen at the same time in their load?

7. Do you not think it a good idea to leave the last super filled this fall, on the hive, to make sure of not having to feed for winter?

May you *live long!* MISSOURI.

ANSWERS.—1. That's a very hard question to answer. An average yield in one place may be very different from an average yield in another place. Perhaps it is not far out of the way to say that an average yield for the whole country may be about 35 pounds per colony. But that's only a guess, and I'm not ready to defend it vigorously. Certainly you ought not to feel sad over a yield of 156 pounds, with buckwheat to follow.

2. I most certainly approve of separators for sections that are to be packed for shipping. If the sections are intended for home use, it is as well to have no separators. I have no trouble with sections being built to separators, but hives are level from side to side. Bottom starters help, too.

3. Drones are very irregular in appearance, and you may find in a hybrid colony drones just like those in a pure colony. But it isn't anything strange if you find drones from one hive going into another hive.

4. It's no great trick to harvest it, I think, although I've had no experience. It does not ripen any too evenly, so you must not wait for all seed to ripen, but cut as soon as the first is ripe. If possible, do all cutting and handling in the morning when dew is on, so the seed will not shell out. If I remember rightly, Pennsylvania farmers used to tie it up, not in the same kind of bundles as wheat or rye, but each bundle made a shock by itself, the butt-ends resting on the ground, and the bundle being tied close up to the top.

5. Each market is a law unto itself, but if you are retailing at the price you name that certainly seems low enough, if not too low.

6. I think it is the common thing for bees to carry both pollen and nectar at the same time.

7. It's an excellent thing for the bees, but rather expensive. Better take off sections a little earlier, and have some extra frames of sealed honey. If you want supers on for the sake of wintering, let them be without sections.

Thanks for your kind wish. My good wife takes such excellent care of me that I'm not likely to be carried off in the flower of my youth.

A Rather Long Queen.

Enclosed find a testimonial. Did you ever see a queen two inches long? ILLINOIS.

ANSWER.—No, I never saw a queen two inches long. I marvel that any queen-breeder should have on his price-list a testimonial saying that a queen "measured fully two inches long." After receiving your letter I spent some time trying to measure a queen that was of good size. She did not very kindly aid me in my quest for knowledge, but as nearly as I could tell by holding a rule over her during the very short time she was willing to stand still, I think she was about seven-eighths of an inch long.

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We have arranged with several of the best queen-breeders to supply us with **The Very Best Untested Italian Queens** that they can possibly rear—well worth $1.00 each. We want every one of our present regular subscribers to have at least one of these Queens. And we propose to make it easy for you to get one or more of them.

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Send us $1.00 and the name and address of one NEW reader for the American Bee Journal, and we will mail you one of the Queens free as a premium.

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As the supply of these splendid Queens is limited, we prefer to use all of them as premiums for getting new subscribers. But if any one wishes to purchase them aside from the Bee Journal subscription, the prices are as follows: One Queen, 75c.; 3 Queens, $2.10; 6 Queens for $4.00.

We expect to be able to fill orders by return mail, or almost as promptly as that, so there will be no great delay at any rate

Now for the new subscribers that you will send us—and then the Queens that we will send you!

We have often wondered **WHY** the old American Bee Journal does not **LEAD** in the number of regular subscribers instead of being second? It is **first** in age, and if we may believe many unsolicited testimonials, it stands first in value and helpfulness to its readers. Now, why not make it take the **first place** in the **number** of its regular readers? That's the question.

The next question is, How can it be done? Well, just like the bees of a colony store its surplus honey. One or two bees do not gather it all. Each working bee does a part. Thus, "many hands make light work"—and the job is soon done.

Now, suppose each present regular reader should say to himself, or to herself; "I'll get **one** new subscriber for the American Bee Journal in the month of July, and another one in August." One a month should not be a difficult matter. It may be that many can do better than that. Many have done so already. But suppose there should be gotten during July and August two new subscribers by each one who now reads the American Bee Journal, wouldn't that be a great thing? We believe it can be done.

You know the American Bee Journal, and can best tell to your bee-keeping friends and neighbors its real worth to any one who will read it carefully, and practice its teachings. We will send you all the free sample copies you can use wisely.

We offer valuable premiums for the work of getting **new** subscribers at **$1.00 each.** In addition to the Queens mentioned on this page, here are a few more premium offers:

More Premium Offers.

For 2 New Subscribers—Dr. Miller's Book—"Forty Years Among the Bees" (book alone, $1.00.)
For 2 New Subscribers—Doolittle's cloth-bound "Scientific Queen-Rearing" book (book alone, $1.00.)
For 1 New Subscriber and 25c, Doolittle's leatherette-bound book (book alone, 75c.)
For 3 New Subscribers—Prof. Cook's book—"The Bee-Keeper's Guide" (book alone, $1.20.)
For 3 New Subscribers—Dadant's Langstroth's book (book alone, $1.20.)
For 3 New Subscribers—the book, "A B C of Bee-Culture" (book alone, $1.20.)
For 1 New Subscriber and 10c—Hutchinson's "Advanced Bee-Culture" (book alone, 50c.)
For 3 New Subscribers—Novelty Pocket Knife with your name and address on one side of handle, and Queen, Drone and Worker-Bee on other side (knife alone, $1.25.)

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Our Rules on Getting New Subscribers

1. The sender of a new subscriber must have his or her own subscription **paid in advance** at least to the end of this year (1904.)

2. Sending your own name with the $1.00 for the Bee Journal will not entitle **you** to any premium. The sender must be already a paid-in-advance subscriber as above, and the new subscriber must be a **NEW** subscriber; which means, further, that the new subscriber has never had the Bee Journal regularly, or at least not for a whole year previous to his name being sent in as a new one; and, also, the new subscriber must not be a member of the same family where the Bee Journal is already being taken.

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Now, we hope that all who can possibly do so will see what they can do in the line of getting **NEW** subscribers for the American Bee Journal. You will likely surprise yourself at the way you will be able to get them. And it will also pay you well, as you will get the valuable premiums we offer to you. We would like to receive **at least two new yearly subscribers from each reader during July and August.** We will be glad to be kept busy at our desk during the hot weather. We never felt better than we do now, so can stand a grand rush of new subscribers. Just let them come!

Now, for a big pull, and a pull all together! How many will be first to send in new subscriptions?

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1	Wooden Honey-Tank with galvanized iron bottom (holds 1800 lbs.)	10.00.
1	6-inch Comb Foundation Mill	15.00.
1	10-inch Comb Founnation Mill	25.00.
100	New L. 10 fr. Dovetailed Hives (each consisting of a Body, Cover and Bottom-Board—all nailed)	95c each.

If you order Combs and Hives, the Combs can be put right into the hives and shipped in that way. All the above can be shipped promptly, so long as they last. First come, first served. What do YOU want out of the lot? or do you want it all? (No order filled for less than $5.00 from the above list.) Also **BEES AND QUEENS,** and Stanley Queen Incubator. Send for free Circular

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FROM MANY FIELDS

Good Prospects for Honey.

I surely can not get along without the American Bee Journal. This is my second year with bees, and I have 27 colonies, and the prospects for a honey crop are good here. Basswood has just opened.

A. H. TIMMERMAN.

Scott Co., Minn., July 15.

Gathering from Alfalfa.

Alfalfa, second crop, is now in full bloom, and bees are collecting honey rapidly from it. The first crop did not yield much honey; in fact, the early part of the season was against bee-keeping. Many strong colonies did not have sufficient honey coming in to supply their necessary demand. Result, hungry swarms, many of which absconded. I fed my bees, kept them busy, divided them as they would bear it, and have had no natural swarms.

DR. G. BOHRER.

Rice Co., Kans., July 15.

Experience in Bee-Keeping.

In 1901 we started bee-keeping, and have had bad luck until the present time. We bought 2 colonies of bees in 1901, and increased to 6, and they wintered well, and in the spring of 1902 we bought 7 more and rented 39, so we had in all 52 colonies of bees. We started to work, and have not stopped yet; we worked and got nothing through the first part of the summer, but in the latter part we divided and ran them up pretty well; put between 92 and 98 (I do not exactly remember the number) away into winter quarters, and came out in the spring with 30 colonies, and we felt pretty sick over it. Before I forget it I will say the rented bees did nothing but build up for the coming winter; that was the spring of 1902, and, in 1903, 15 colonies were turned back New Year's day, so we got rid of them. All the rented

An Apiary For Sale! 50 colonies in 8 frame dove-tailed Hives, all in fine condition. Also a good retail supply business established 20 years. All goes for $150.
30A4t E. W. COE, CLARENCE, IOWA.

Nickel Plate Excursion

to Boston, Mass., and return, account G. A. R. National Encampment, at $17.75 for the round-trip, from Chicago. Tickets good on any train August 12th, 13th and 14th, and on special train from Chicago at 8 a.m., August 13th. Final return limit September 30th. Also rate of $20.70 for round-trip via New York City and Boat, with liberal stop-over returning at that point. If desired, stop-over can be obtained at Niagara Falls and Chautauqua Lake within final limit. Three trains daily, with modern sleeping-cars. Particulars at city ticket office, 111 Adams St., Chicago, or address John Y. Calahan, General Agent, 113 Adams St., room 298, Chicago, for reservation of berths in through standard or tourist sleeping-cars. 18—30A3t

bees had been handled so poorly; I think that is the reason they did nothing.

We expect a fairly good crop of honey this summer. We commenced extracting this morning.

We have put our bees in double-wall, chaff-top hives, with 15 frames instead of 10. Do you think they will winter as well as in the single-wall, 10-frame?

We have also found a new scheme for foundation that we have never read of any where, and so far there is no dissatisfaction, no breaking down of combs, no crooked ones, and just as smooth as need to be. We take wrapping-twine or carpet-warp, and dip it into wax which has been melted, using it as hot as possible, then lay it along the center of the top-bar. It is cheap, and quickly done.

J. S. Ellifritz.

Uinta Co., Utah, July 11.

A Little Too Wet.

Bees are doing splendidly, though it is still a little too wet. There is any amount of white clover, and considerable alsike clover here. The bees wintered very poorly in this locality, and now they are trying to make up for lost time.

I use the Langstroth hives, but make my own. Leonidas Carson.

Trumbull Co., Ohio, July 13.

New York Bee-Keeper's Experience.

I saw in last week's number of the American Bee Journal a reference to a Methodist experience meeting. It has been my lot to attend such meetings for the last 40 years, and I find they are very helpful in the religious life. I am situated within 2½ miles of where Ethan Allen made the demand for the surrender of Fort Ticonderoga, on the shore of Lake Champlain, and our valley is covered with white clover this

DEATH TO LICE.

LICE SAP LIFE
That's how they live and thrive. You can't have healthy, profitable fowls or stock and have lice too. Let
Lambert's Death to Lice
take care of the vermin and you will be more busy taking care of the profits. Makes sitting hens comfortable. Sample 10 cents; 100 oz., $1.00 by express. "Pocket Book Pointers" free.
D J. Lambert, Box 707, Apponaug, R I.
Please mention Bee Journal when writing

Cheap Rates to Boston via New York City and Boat.
$20.70 for the round-trip, from Chicago, via Nickel Plate Road, August 12th, 13th and 14th, with liberal stop-over at New York City returning, and also stop-over at Niagara Falls and Chautauqua Lake within final limit, if desired. Also rate of $17.75 from Chicago to Boston and return, via direct lines. Tickets good on any train on above dates and also on special train from Chicago at 8 a.m., August 13th. Final return limit September 30th, by depositing ticket. Through sleeping-car service. Meals in Nickel Plate dining-cars, on American Club Meal Plan, ranging in price from 35 cents to $1.00; also service a la carte. Write John Y. Calahan, General Agent, 113 Adams St., room 298, Chicago, for reservation of berths in through standard and tourist sleeping-cars, and full particulars. 19—30A3t

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Root's Goods at Root's Prices.
Everything used by Bee-Keepers. POUDER'S HONEY-JARS. Prompt Service.
Low Freight Rates. NEW CATALOG FREE.
WALTER S. POUDER,
513-515 Massachusetts Avenue, INDIANAPOLIS, IND
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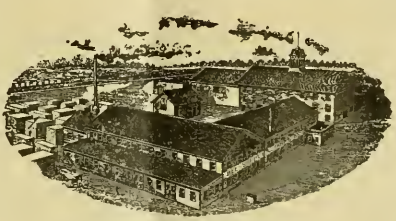
BEE-KEEPERS!
Don't forget that we are the largest jobbers in the United States of
ROOT'S BEE-SUPPLIES,
Johnson Incubators and Brooders,
Humphrey's and Mann's Bone-Cutters,
Poultry Supplies of all Kinds, Seeds and Implements.
Remember, you get these goods at Factory Prices, and save half the freight.
Let us book your order for Golden Italian, Red Clover and Carniolan QUEENS; listed in our Catalog. Send for Free Illustrated Catalog.
GRIGGS BROS., 521 Monroe St., TOLEDO, OHIO.
Please mention Bee Journal when writing.



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We carry a large stock and greatest variety of everything needed in the Apiary, assuring BEST goods at the LOWEST prices, and prompt shipment. We want every bee-keeper to have our FREE ILLUSTRATED CATALOG, and read description of Alternating Hives, Ferguson Supers, Etc. Write at Once for Catalog.
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Fulton & Ford, Garden City, Kan.
I. H. Myers, Lamar, Colo.

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Root's Goods at Root's Factory Prices.
☞ Complete stock for 1904 now on hand. Freight-rates from Cincinnati are the lowest. Prompt service is what I practice. Satisfaction guaranteed. Langstroth Portico Hives and Standard Honey-Jars at lowest prices.
You will save money buying from me. Catalog mailed free. Send for same.
Queens Now Ready to Supply by Return Mail.
Golden Italians, Red Clover and Carniolan Queens, Untested, during June, 1, 75c.; 6, $4.00; 12, $7.50.
C. H. W. WEBER,
Office and Salesrooms—2146-48 Central Ave.
Warehouses—Freeman and Central Aves.
CINCINNATI, OHIO.

Marshfield Manufacturing Co.
Our specialty is making SECTIONS, and they are the best in the market. Wisconsin Basswood is the right kind for them. We have a full line of BEE-SUPPLIES. Write for FREE Illustrated Catalog and Price-List.
THE MARSHFIELD MANUFACTURING CO., Marshfield, Wis.
Please mention Bee Journal when writing

Special Notice to Bee-Keepers

BOSTON

Money in Bees for you.
Catalog price on

ROOT'S SUPPLIES.

Catalog for the asking.

—:—

F. H. FARMER,
182 Friend St., Boston, Mass.
Up First Flight.

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VIRGINIA QUEENS.

Italian Queens secured by a cross and years of careful selection from Red Clover Queens and Superior Stock obtained of W. Z. Hutchinson. I can furnish large, vigorous Untested Queens at 75 cents; after June 15, 60c. Tested Queens, $1.00; after June 15, 75c. Write for discount on large orders.

CHAS. KOEPPEN,
22Atf FREDERICKSBURG, VA.

If you want the Bee-Book

That covers the whole Apicultural Field more completely than any other published,
Send $1.20 to

Prof. A. J. Cook, Claremont, Cal.,
—FOR HIS—
"Bee-Keeper's Guide."
Liberal Discounts to the Trade.

Take Notice That the New Century Queen-Rearing Co. will have 1000 Queens ready for the mail by April 20. Tested, $1.00; Untested, 75c; 5 for $3.25; 10 for $6.00. Prices on larger quantities and Nuclei given on application. "Prompt service; fair treatment" is our motto.
Address,

John W. Pharr, Prop., Berclair, Tex.
13Atf Please mention the Bee Journal.

WE SELL ROOT'S GOODS IN MICHIGAN
Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Beeswax Wanted for Cash.
M. H. HUNT & SON.
BELL BRANCH, WAYNE CO., MICH.

BINGHAM'S PATENT Smokers
25 years the best.
Send for Circular.
25Atf **T. F. BINGHAM, Farwell, Mich.**

National Encampment, G. A. R.

The Nickel Plate Road will sell tickets, August 12th, 13th and 14th, at $17.75 for the round-trip from Chicago, via direct lines, with stop-over at Niagara Falls and Chautauqua Lake, if desired, within final limit. Also, if preferred, rate of $20.70 between same points for the round-trip via New York City and Boat, with liberal stop-over returning at that point. Tickets good on any train on above dates and also on special train from Chicago at 8 a.m., August 13th. Final return limit September 30th. Meals served in Nickel Plate dining-cars, on American Club Meal Plan, ranging in price from 35 cents to $1.00; also a la carte City Ticket office, Chicago, 111 Adams St. Chicago depot, La Salle St. Station, cor. Van Buren and La Salle Sts., on the Elevated Loop. Write John Y. Calahan, General Agent, 113 Adams St., room 298, Chicago, for reservation of berths in through standard and tourist sleeping-cars, and other detailed information. 20—30A3t

season, and what bees came through the severe winter are doing nicely. I had one swarm that issued June 14; July 5 I took off one super of 40 sections, and July 7 I took off the second super of 40, and I have at this date two more supers nearly filled by the same swarm.

I am getting 18 cents per section for the No. 1. I extract all cull sections, and sell my extracted honey in bottles and 2-quart pails. The honey this season is very white, and the sections well filled. I use the Langstroth frame. My brood-chambers hold 11 frames; that gives me a good working force of bees in the honey-flow. I have 25 colonies of bees now; at one time I had 75 colonies, but I lost them down to 4, but I am gaining some.

I have kept bees for 16 years, and I find the American Bee Journal a great help. I would not try to handle bees without it, and "A B C of Bee-Culture."

I intend to have a photograph taken of my apiary in the near future, and I will send you one.

On page 442 I notice the question asked in regard to an extractor for unfinished sections. I take two 2-inch frames that will hold 8 sections each, and put them in the Cowan extractor. I can extract 16 sections at a time, and do nice work. G. H. ADKINS.

Essex Co., N. Y., July 18.

What to Learn.

Learn to laugh. A good laugh is better than a bee-sting.

Learn to attend strictly to your own business—a very important point.

Learn to tell a story; a well-told story is as wholesome as a sunbeam in a sick-room.

Learn the art of handling the bees with care, for, if you don't, they will tell where they are.

Learn to avoid ill-natured remarks, and everything calculated to create friction.

Learn to keep your troubles to yourself. The world is too busy to care for your ills and sorrows.

Learn to stop croaking. If you can not see any good in this world, keep the bad to yourself.

Learn to greet your friends with a smile.

And last, but not least, is to learn to get some one to subscribe for the old American Bee Journal.

W. H. HOBERT.

Muscatine Co., Iowa, July 20.

Cane Sugar and Maple Sugar.

Allow me to offer a criticism of E. E. Hasty's statements regarding sugars, on page 150. He says: "You may meet a chemist who will tell you that cane sugar and *maple sugar* are the same—and all common folks of good sense know they are not." Well, I suppose I must not be one of the "common folks of good sense," for I believe they are the same, excepting that the sugar in the maple has taken up the peculiar flavor of the tree. And that is why I believe it. I, and others, have made a decoction of the rough bark of the maple, and by using two parts *granulated* sugar to one of the decoction, have obtained a syrup that the average person could not distinguish from the real maple syrup. As to their sweetening powers not being the same,

ITALIAN QUEENS!

Either Golden or Honey-Queens After July 1.

Our GOLDENS will come up with any other Golden strain. Our HONEY-QUEENS are what some breeders call "Red Clover Queens."

	1	6	12
Untested	$ .75	$ 4.00	$ 7.00
Tested	1.25	7.00	13.00
Breeders	5.00	....	....
2 frame Nuclei (no queen)	2.00	11.00	22.00

When Queens are wanted with Nuclei add price of any Queen wanted. We guarantee safe arrival of all Queens and Nuclei. Our Breeders may be returned after 30 days if satisfaction is not given. Cash must come with all orders. Orders are booked and filled in rotation.

Mr. Gus. Picaman, of Litchfield, Ill., in a letter of Aug. 3, 1903, says: "Send me two untested honey-queens. The one I bought of you two years ago is all right. There are no better."

Mr. Frank D. Gunderson, of Oconomowoc, Wis., says in a letter dated August 1, 1903: "I like your queens the best of any that I have ever had." This man placed an order last August for 24 Nuclei to be delivered this spring.

Address all orders to

D. J. BLOCHER, Pearl City, Ill.
☞ This ad. will appear every other number
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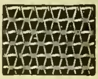

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10 CENTS A YEAR.

The Dixie Home MAGAZINE, largest, brightest and finest ILLUSTRATED MAGAZINE in the world for 10c a year, to introduce it ONLY.

It is bright and up-to-date. Tells all about Southern Home Life. It is full of fine engravings of grand scenery, buildings and famous people. Send at once. 10c a year, postpaid, anywhere in the U. S., Canada and Mexico. Six years, 50c. Or, clubs of 6 names, 50c; 12 for $1. Send us a club. Money back if not delighted. Stamps taken. Cut this out. Send to-day. THE DIXIE HOME,
24A48t No. 75. Birmingham, Alabama.

ITALIAN QUEENS,
BEES AND NUCLEI.

Choice home-bred and Select Imported Stock. All Queens reared in full colonies.

One Untested Queen	$. 65
" Tested Queen	.90
" Selected "	1.10
" Breeder "	1.65
" Comb Nucleus (no Queen)	1.00

All grades ready now. Safe arrival guaranteed.

For prices on quantities and description of each grade of Queens, send for free Price-List.

J. L. STRONG.
204 East Logan Street, CLARINDA, IOWA.
Please mention Bee Journal when writing

This Lightning **Lice Killing Machine**

kills all lice and mites. No injury to birds or feathers. Handles any fowl, smallest chick to largest gobbler. Made in three sizes Pays for itself first season. Also *Lightning Lice Killing Powder, Poultry Bits, Lice Murder, etc.* We secure special low express rates. Catalog mailed free. Write for it.
CHARLES SCHILD, Ionia, Mich.

$10,000 WE HAVE JUST COMPLETED OUR TEN THOUSAND DOLLAR BEE KEEPERS' SUPPLY MANUFACTURING PLANT

—and are ready to do business. Write us for leaflet showing our special Hives and prices. It is the greatest bargain you ever saw.

Mondeng Mfg. Company,
147 Cedar Lake Road.
MINNEAPOLIS, - MINNESOTA.
Please mention Bee Journal when writing.

why should they be? Would the syrup made from pure sugar, and then flavored with sour fruit-juice, have the same sweetening power as the pure syrup unflavored? The flavoring in the maple, just as with fruit-juice, uses up part of the sweetening power of the sugar. As to the judge on the bench, he would probably fine you as heavily if you would sell syrup (or sugar) highly flavored with fruit-juice for the pure and unflavored article.

WM. MOORE.

Ontario, Canada, April 11.

Not Doing as Well as Last Year.

After getting over my sickness, when I was able to examine the bees, I found that 4 colonies were smothered by the sleet and ice accumulating in front of the entrance, and one colony was queenless, making a loss of 5 colonies. Had I not been confined to the bed it would not have happened. You see, I am not as strong as I used to be; I am in my 77th year. I got my first colony when I was 16 years old, out of a large basswood limb, after a storm had broken it off of a 4-foot tree, in Ontario, Canada.

The bees have not been doing as well this year as last year, on account of cold, wet weather; however, I have taken 75 one-pound boxes off of the hives, and the bees are working on two sets of supers. If the flow holds out they may fill them from that down to 25 pounds. The rain may be the means of a good flow from smartweed and asters in August and September. They are still gathering from white clover.

D. C. MCLEOD.

Christian Co., Ill., July 14.

ANOTHER

CAR-LOAD

of Hives, Sections, and Supplies of all kinds just arrived from G. B. Lewis' Factory, and are ready to fill orders quick. Send us your orders for everything. We have it.

Louis Hanssen's Sons
DAVENPORT, IOWA.

5A26t Please mention the Bee Journal.

HENRY ALLEY
will be ready to ship

Fine Adel Queens!

By Return Mail on July 20.

S. F. Sampson, of Ronceverte, W. Va., says: "Your queens are good, and I can depend on them every time."

Robt. Forbes, East Milton, Mass: "Your Adel bees are away ahead of anything else I have."

Extra Tested Breeding Queens and my new book on "Queen-Rearing," $1.50. Catalog and a small booklet on queen-rearing sent free.

29A4t WENHAM, MASS.

Wanted — Bee-Keepers

To write for our prices on SECTIONS. We manufacture them, and are dealers in BEE-SUPPLIES. Send for special price and Catalog.

AUG. LOTZ & SON,
24A17t CADOTT, WIS.

Please Mention Bee Journal when writing advertisers.

CONVENTION NOTICE.

National at St. Louis.—The annual session of the National Bee-Keepers' Association for 1904 will be held in September, at St. Louis, Mo.

Sept. 27 and 28 will be devoted to Association work and its interests. We expect many prominent foreign bee-keepers to be present on these days.

Sept. 29, National Day.

Sept. 30, Inspectors' Day. Twenty bee-inspectors from all over the United States and Canada are counted on to introduce and discuss "The Diseases of Bees," etc.

Mr. N. E. France will exhibit, in the Convention Hall, a large map of the United States, Canada, Cuba and Europe. Each State and Country will have a shelf attached to the map with a one-pound sample of each kind of honey produced. Many other exhibits of special interest will be shown.

We expect to see the largest gathering of bee-keepers ever held in this country. A more detailed program will appear later.

GEO. W. BRODBECK, Sec.

Los Angeles, Calif.

WANTED — COMB HONEY, WHOLESALE.— Will buy your crop outright, cash at your depot anywhere in the U. S., if price and quality are right. We have salesmen in nearly every market in U. S., but buy only through Thos. J. Stanley, Manzanola, Colo., our honey-man who spends the season in the West superintending our apiaries and looking after Western car-lots of honey. Address us there direct, stating what your honey is gathered from, what grade, the average weight of section, how packed, color, etc.; quantity, when you can deliver, and lowest cash price per pound properly crated and delivered to your depot. Would like to know about what the freight rate to your nearest city. We believe that our purchases are larger than any other firm or association. Yours for business, **THOS. C. STANLEY & SON,**
29Atf MANZANOLA, Otero Co., COLO.

—— IT PAYS ——
to order your

Bee-Supplies & Winter-Cases

NOW, while we can serve you PROMPTLY, and get them at BOTTOM PRICES.

R. H. SCHMIDT CO., Sheboygan, Wis.

27A26t Please mention the Bee Journal

FOR SALE—in Arizona, on the Gila River, RANCH AND BEES.

150 colonies or more of fine ITALIAN BEES in L. hives, L. and H. frames, extra supers, with combs, 6 frame Cowan Extractor, Tanks, etc. This was a poor year on account of sand-storm at time of blossoming of mesquite; got only 185 cases. The honey from mesquite is water-white. We have W. Moody, cottonwood, willows to build up on in abundance; alfalfa yields good here; also a few of the honey-trees. Ranch of 80 acres, about 20 fenced. Alfalfa in stack worth about $100 to $150; alfalfa in seed, about $300 to $400; pair of fine mares, for work and saddle; two colts, 1½ years, as large as dams; wagon and harness. Adobe of 4 rooms, 2 beds, stove, and cooking utensils—a batch's outfit. Plenty of game; costs nothing for wood; 7 miles from station. New canal being put in. Hot for about 2 months; rest of year finest of fine. A good place for sore lungs. You buy for cash this bargain for $1,200. A good year for the bees will give you 20 to 30 tons of honey. About 15 acres are nearly ready to plant. Good stock country; anything you plant will grow here. Good reasons for selling. For more information, call on or address,

W. F. MCDONALD,
30Atf PALOMAS, Yuma Co., ARIZONA.

Additional Sleeping-Car Service.

The Nickel Plate Road has placed an additional vestibuled sleeping-car on train leaving Chicago at 9:15 p.m., daily, and also on train from Cleveland to Chicago, arriving Chicago 7:40 a.m., daily, for passengers between Chicago and Cleveland, in both directions, and intermediate points. Three daily trains. No excess fare. American Club Meals, ranging in price from 35c to $1.00, served in Nickel Plate dining-cars; also service a la carte, and mid-day luncheon, 50c. Chicago city ticket offices, 111 Adams St., and Auditorium Annex. 'Phones Central 2057 and Harrison 2208. Chicago depot, La Salle St. Station, cor. Van Buren and La Salle Sts. 16—28A3t

HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, July 19—There is a plentiful supply of honey of all kinds on the market with no sales being made; prices therefore cannot be more than on an asking basis. Very little if any choice to fancy comb, but a large amount of what would average No. 1 is offered at 10@12c; no sale for off grades or damaged lots. Extracted, white, 6@7c; ambers, 5@6c. Beeswax, 27@28c.

R. A. BURNETT & CO.

CINCINNATI, O., July 7.—The sales of comb honey, which are made now, amount but to very little. Some fancy comb left from last season finds sales for 12½@13½c. The new is just beginning to be offered and small lots are coming in. Extracted for manufacturing purposes finds a fair demand. I quote amber in barrels from 5¼@5½c; in cans, ½c more; water-white alfalfa, 6½c; extra fancy white clover, 7½c. Beeswax, 28c.

C. H. W. WEBER.

ALBANY, N. Y., June 3.—The honey market is very dull now, and prices nominal. Receipts are very light and demand the same. We quote comb honey, in good order, white, 13@15c; mixed, 12@13c; dark, 10@12c. Extracted, buckwheat, 5½@6c; mixed, 5½@6c; white, 6½@7c. Beeswax, 30@32c.

H. R. WRIGHT.

CINCINNATI, June 15.—The demand for honey is slow for this season of the year, which is due to the vast quantities that were held over from last season, and the importation of Cuban honey. We quote amber in barrels and cans at 5¼@6½c; white clover, 6½@8c. Beeswax, 30c.

THE FRED W. MUTH CO.

BOSTON, July 8.—Our market on honey, both comb and extracted is practically in a slumbering condition, as there is really no call whatever.

Prices remain as before quoted, but are really only nominal.

BLAKE, SCOTT & LEE.

KANSAS CITY, July 25.—The receipts of new honey are gradually growing heavier, although it is a little earlier yet for much of a demand; with good weather, we look for the demand to pick up considerably. Market to day on fancy white comb honey, and No. 1 stock, $2.75 per case of 24 sections. Beeswax moving slowly at 30c per pound.

C. C. CLEMONS & CO.

NEW YORK, June 21.—Very little demand for comb honey. Some trade for No. 1 and fancy white, at from 12@13c, while dark and amber are almost unsalable. Extracted is in fair demand, although prices are irregular. We quote from 5@6½c, according to quality. Southern in barrels, at from 50@55c per gallon.

Beeswax more plentiful and prices are gradually declining. We quote 28@29c.

HILDRETH & SEGELKEN.

PHILADELPHIA, July 8.—There is little or no call for comb honey and no sales being made, with some offers of new crop at varying prices. There has been a big lot of extracted honey carried over, enough to carry through the season if no more was produced this season, from from the present outlook. We quote fancy extracted, white, 7@7½c; amber, 6c; Southern, 5½c. Beeswax lower—28c.

We are producers of honey and do not handle on commission.

WM. A. SELSER.

SAN FRANCISCO, July 13.—White comb, 1-lb. sections, 12½@13c; amber, 9@11c. Extracted, white, 5½@6c; light amber, 5@5½c; amber, 4@4½c; dark amber, 3¼@3¾c. Beeswax, good to choice, light, 28@30c; dark, 26@27½c.

Strictly choice water-white is in light supply and market for such is tolerably firm, there being a fair inquiry on local account. For amber grades, however, there is not much demand, except for shipment abroad at lower prices than are prevailing in this center or than apiarists are willing to accept.

HONEY AND BEESWAX
When consigning, buying or selling, consult
R. A. BURNETT & CO.,
199 SOUTH WATER ST. CHICAGO, ILL.

Wanted To Sell My Apiary of 90 colonies. Good condition; straight combs; good location. A liberal discount on fixtures and supplies. B. F. HASTINGS, Perry Park Col.

29A2 Please mention the Bee Journa

PERFECT GOODS!
LOW PRICES!

A Customer Once, a Customer Always.
We manufacture

BEE-SUPPLIES

OF ALL KINDS.
(Been at it over 20 years.)

It is always BEST to buy of the makers.
New Illustrated Catalog Free.

For nearly 14 years we have published

The ‡ American ‡ Bee-Keeper

(Monthly, 50c a year.)

The best magazine for beginners, edited by one of the most experienced bee-keepers in America. Sample copy free.
Address,

The **W. T. FALCONER MFG. COMPANY**
JAMESTOWN, N. Y.

W. M. Gerrish, Epping, N. H., carries a full line of our goods at Catalog prices. Order of him and save the freight.

Please mention Bee Journal when writing.

I. J. STRINGHAM, 105 Park Place,
NEW YORK

Manufactures and carries in stock every article a bee-keeper uses. BEES AND QUEENS IN SEASON.
Apiaries—Glen Cove, L.I. Catalog free.

ST. LOUIS, 1904.

Bee-Keepers' Supplies Galore.
Catalog Free.
A No. 1 Smoker by mail, $1.

Bees, Honey and Beeswax bought and sold for cash.

LEAHY MFG. CO.,
1 ALTA SITA, EAST ST. LOUIS, ILL.

Rush Orders

Are pouring in, but we are filling them (almost every single one) within a few hours after they are received. We can ship

Sections, Comb Foundation, and Dovetailed Hives
UPON RECEIPT of ORDER
in regular packages.
Open Day and Night.
Shipping Facilities Unequaled Anywhere.

C. M. Scott & Co. 1004 East Washington St.
INDIANAPOLIS, IND.

I ARISE

To say to the readers of the BEE JOURNAL that

DOOLITTLE...

has concluded to sell QUEENS in their season during 1904, at the following prices:

1 Untested Queen	$1.00
3 Untested Queens	2.25
1 Tested Queen	1.25
3 Tested Queens	3.00
1 select tested queen	1.50
3 " " Queens	4.00
Select Tested Queen, last year's rearing	2.50
Extra selected breeding, the very best	5.00

Circular free, giving particulars regarding each class of Queens, conditions, etc. Address,

G. M. DOOLITTLE,
24Etf Borodino, Onondaga Co., N. Y.

Please mention Bee Journal when writing.

27th Year **Dadant's Foundation** 27th Year

We Guarantee Satisfaction. What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS. PATENT WEED-PROCESS SHEETING.

Why does it sell so well? Because it has always given better satisfaction than any other. Because in 26 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material.
We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies
OF ALL KINDS.

Langstroth on the Honey-Bee—Revised
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

DADANT & SON, Hamilton, Hancock Co., Ill.

Please mention Bee Journal when writing.

DON'T RUN THE RISK
Of Having to Wait for
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Symbiosus—Bees and Legumes.
PROF. A. J. COOK.

Rearing Queens—Method Described.
THOMAS BRODERICK.

AMERICAN BEE JOURNAL

WEEKLY—$1.00 A YEAR.

Published by GEORGE W. YORK & CO., 334 Dearborn Street.

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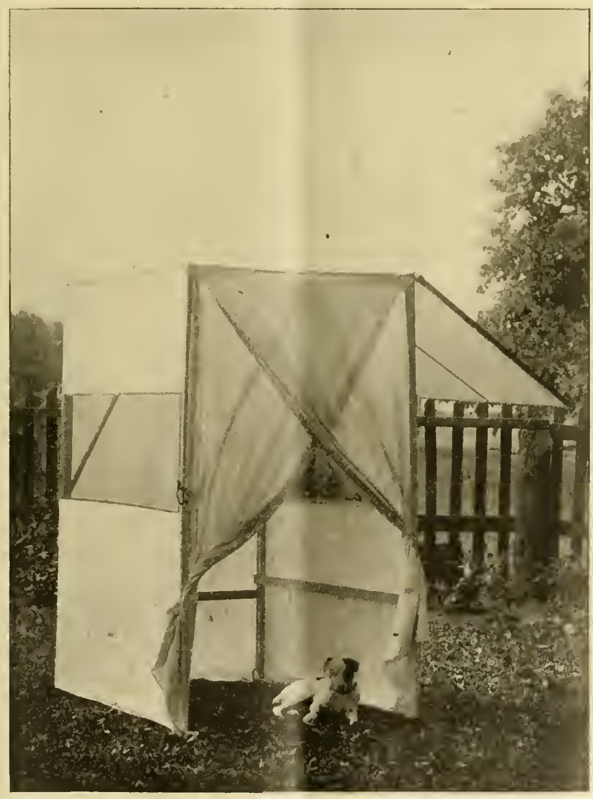
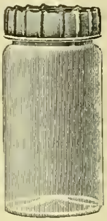


A HANDY BEE-TENT BELONGING TO JOHN NEWTON, OF ONTARIO, CANADA. (See page 532.)

MARKETING YOUR CROP.

If you sell to the retail trade nothing helps sales better than a neat package. If you sell to commission merchants your honey packed well will always bring the best prices. You are a penny wise and a pound foolish if you market your crop in anything but the best packages. It is appearance as well as quality that brings new customers and holds old.



Simplex Jars.

The latest and best. 1-lb. size only. It is going to supersede our No. 25 jar. Prices on application.

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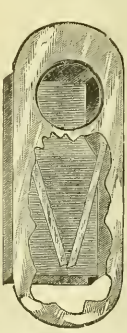
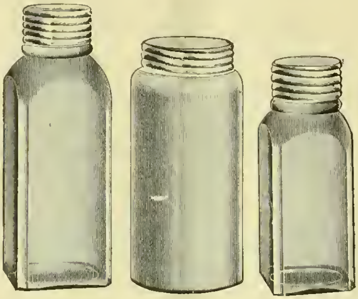
A fine way to put your name on your section-cases is to use a Rubber Stamp. Full prices and description of our various styles are found in our Rubber Stamp Catalog. Free.



Bee-Escapes.

No comb-honey producer can be without an outfit of these Escapes. They save much hard work. Your honey is taken off in good order and with a minimum of disturbance. See general catalog for prices.



Hershiser Jars.

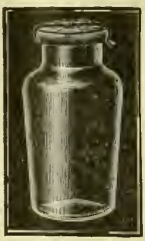
Very neat and attractive. Cork-lined aluminum caps which seal tight. Clear flint-glass. They are made in four sizes square: ¼-lb., ½-lb., 1-lb., and 2-lb. In three sizes round: ½-lb., 1-lb., and 2-lb. For prices, see general catalog. Other prices and styles also shown in this catalog. If you have not a copy, request it of our nearest branch house or agency.

No-Drip Shipping-Cases.

The best package for marketing your comb honey made from selected basswood smoothly cut. In all sizes for different widths and kinds of sections. Prices given in general catalog. Get the best prices for your honey this year.

Screw-Caps.

We can furnish nearly all sizes and styles of screw-caps and honey-gates. See general catalog for prices and descriptions.

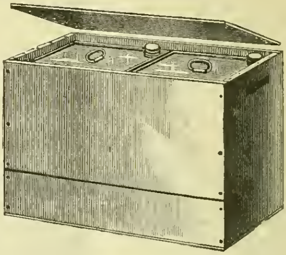


Tip-Top Jars.

Sealed with a rubber ring under the rim of glass top, and held securely by a spring-top fastener. ½-lb. and 1-lb. sizes. See catalog.

Honey-Labels.

We print a complete line of attractive labels to put on all sizes of honey-jars. Sample book and prices on application.



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Our 5-gallon square tin cans are the favorite for shipping extracted honey. Used exclusively in the West. See our prices before buying. Can be shipped from branch houses.

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AND MANY AGENTS.

Established in 1861

AMERICAN BEE JOURNAL

The Oldest Bee-Paper in America

Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor. CHICAGO, ILL., AUG. 4, 1904. Vol. XLIV—No. 31.

Editorial Comments

Sending Samples by Mail.

Probably not one bee-keeper in ten who sends samples of bees or brood by mail packs them properly. A bee will be sent in a letter, mashed beyond recognition. A piece of comb containing diseased brood will be sent in a slight pasteboard box that succumbs to the pressure in the mail-bags. A tin box is the best in which to send brood, although wood will answer. Do not send a small piece of brood in a large box to rattle around and become mashed into a pulp in hot weather. If the piece of brood does not exactly fill the box, pack cotton or newspaper about it so that it can not move. Foul brood inspectors will appreciate this.

Is Your Own Honey Market Supplied?

A good many bee-keepers are hardly as much awake as they should be to the possibilities of their home market. It might be worth while for each one to do just a little figuring to see whether the people who live in his own place consume as much honey each year as do the people who live in Mr. N. E. France's city. About 14,000 pounds of extracted and 700 of comb for 3500 people—those are the figures. That makes 4 1/5 pounds for each man, woman, and child; 4200 pounds for each 1000 people. If that much is not sold in your place, don't you believe you could do something to bring it about? Mr. France's neighbors ought not to be honey-eaters above all others; can not your neighbors be brought up to their level?

Getting a Bee-Inspector Law.

We have received the following question concerning the procedure to follow in order to secure a State law on bee-diseases, and the appointment of bee-inspectors:

> American Bee Journal—
>
> Can you give me any instructions as to how to institute a law to have a bee-inspector in this State? We have some poor bees and foul brood; I got it from an old bee-keeper, though he claims it is not in the State. I called three old bee-men, and they all looked at it but did not know, but I did by the description, and burned everything, so as not to take any chances.
>
> Yours truly,
>
> Leon E. Miner.

Perhaps the plans followed by Illinois and Ohio are as good as any, which, in brief, are as follows:

The principal bee-keepers' associations in each of the States named started the ball rolling by getting some member of the legislature to introduce a bill, which was then referred to the proper committee.

After that all the bee-keepers of the State were urged to flood not only the members of the committee to which the bill had been referred, but also all the other members of the legislature, with letters requesting them to give their support to the bill whenever it came up.

Minnesota can have this necessary law, if the bee-keepers of that State will go after it during the next session of their State legislature.

Bees Mixing in Hives.

It is well known that drones are freebooters, and will enter any colony willing to tolerate drones of its own. It is not so well understood, especially among beginners, that there is more or less mixing of workers. A loaded bee, returning from the field, is blown to the ground in front of some hive other than its own, and crawls in. By this and other means there is more mixing than might be suspected. It is important in some cases that this should be understood. A queen has been bought for pure Italian, perhaps, and the purchaser doubts her purity because he finds among her progeny at a time when they should no longer be there, bees that are undoubtedly black. Unless he finds these among the downy babies that have just crawled out of their cells, he can hardly be sure that they did not come from other colonies.

Expert Opinion on Diseased-Brood Samples.

Subjects for consideration in the department of "Dr. Miller's Answers" take a very wide range, and there is no desire to limit that range, even if it sometimes obliges the Doctor to fall back on the reserve answer, "I don't know." To this, however, there is one exception; the Doctor is not, and does not pretend to be, an expert in diseases of brood, as foul brood, pickled brood, and black brood. No matter how well read he may be on the subject, he has not had the experience of the man who has become an expert by seeing and treating hundreds of cases. In a matter involving such serious results, it is of the first importance that a bee-keeper who finds some suspicious appearance in the brood of some colony or colonies should know as positively, and as soon as possible, just what the trouble is, and how it is to be treated. For lack of this expert knowledge severe loss has been sustained by the destruction of colonies when no contagion was present; in other cases still greater loss has occurred because the disease was allowed to spread for want of the proper treatment.

If you have suspicion that foul brood, or either of the other brood diseases, has thrust its unwelcome presence upon you, don't waste time by asking Dr. Miller about it, but at once send a sample of the diseased brood to one of the experts, perhaps the foul brood inspector of your county, State, or province. If you have no such officer, there still remains the privilege of applying to the General Manager of the National Bee-Keepers' Association, who is at the same time the very efficient foul brood inspector of his own State, Mr. N. E. France, of Platteville, Wis. Mr. France very kindly agrees to give his valuable opinion to any one who is a member of the Association, although this imposes on Mr. France a burden that perhaps he ought not to be called upon to bear. As a rule, the Association does not agree to give financial aid to any one who applies for membership *after* he gets into trouble, but the present case is somewhat different, and if you are not a member of the Association send along with your letter of inquiry a dollar, and you will become a member in full standing.

So please don't send to Dr. Miller samples of diseased brood, thus making delay when delay is dangerous, but apply at once to your foul-brood inspector, or Mr. France, and don't write without sending a sample at the same time.

Sixty Acres of Alsike and Sweet Clover.

From Frank Coverdale comes the report that in Jackson Co., Iowa, the yield from white clover is practically nothing, but basswood, at date of writing, was promising, and an apiary of 160 colonies was doing a rushing business on 30 acres of alsike, with 30 acres of sweet clover to receive attention later. The sweet clover is an early variety, and he pastures cattle on it from early spring, so the plants are kept low and bushy, not preventing the growth of young plants from this spring's sowing. In this way he expects a crop every year. His report of the crop will be looked for with interest.

Miscellaneous Items

Basswood Bloom was abundant in Wisconsin this year, but the nights were too cool for a good honey-flow.

* * *

M. H. Mendleson, the great bee-keeper of Ventura Co., Calif., has been suffering badly in both arms from poison by a spider bite.

* * *

E. France, the honored father of General Manager N. E. France, has been quite sick lately, but is some better now. He is over 80 years of age.

* * *

Two More Complaints have come in from California to General Manager France. They are that bees were a nuisance, and injurious to fruit; no honey, so the bees work on such sweets as they can find.

* * *

The National Association had 1884 paid-up members on July 25. There are several hundred whose dues expired lately, so that if all were paid up there would be quite a good many over 2000 members of the National Bee-Keepers' Association. Not so bad. Some of these days we may catch up with the bee-keepers' associations of Germany in the point of membership. In the matter of excellent meetings perhaps we equal them now.

* * *

Mr. O. L. Hershiser has lately effected the settlement of a case in Buffalo, in which the National Association was interested. Thus costs of suit were saved. Organization is a great thing. So is good management. General Manager France, with the co-operation of leading bee-keepers in various parts of the country, is doing a great work for bee-keepers and bee-keeping everywhere. The National Association has important work to do along the original lines for which it was organized. It is fulfilling its mission, and will continue to prove its worth more and more as time goes on.

* * *

Mr. Geo. W. Brodbeck, of Los Angeles, Calif., who is the present secretary of the National Bee-Keepers' Association, has been improving slowly in health since his late long and very severe sickness. In a letter dated July 12, he wrote that he expected in a few days to go to his bee-ranch for a stay of a few weeks, as it always has benefited him so much up in the mountains. He said it would interest him to see his trees and vines growing, and hear the bees humming again after an absence of over six months.

* * *

Death of H. C. Morehouse.—On July 27 we received the following from Mr. M. A. Gill, of Boulder Co., Colo., dated July 25, announcing the rather sudden and unexpected death of Mr. Morehouse:

> FRIEND YORK:—I have just received a message from Boulder, announcing the death of our friend, H. C. Morehouse. He was taken violently sick in one of his apiaries a week ago with what proved to be inflammation of the stomach, and died this morning. A large delegation of bee-keepers will attend his funeral, from Longmont.
>
> The news came like a shock to me, as I had learned to love him as a brother. He was such a companionable fellow, and all his actions and arguments were based upon principle, and, had he lived, would have made himself known here in the West. We shall greatly miss him. Surely, in the midst of life we are in death.
>
> Yours very truly, M. A. GILL.

Bee-keepers everywhere will unite with us in extending sincerest sympathy to Mrs. Morehouse in her great bereavement. Mr. M. was a splendid man. We had the good fortune to meet him at the Denver convention of the National Association two years ago. And we liked him. Since then some very pleasant correspondence has passed between us. His letters always exhibited a beautiful, kindly spirit. But he is gone. He will be sadly missed not only in his home, but in various walks in life. It will not be an easy matter to fill his place.

Mr. Morehouse was the very efficient secretary of the Colorado Bee-Keepers' Association. Until recently he was editor of the Rocky Mountain Bee Journal, one of the very best new bee-papers ever started. He was a hard worker, and after selling his paper he devoted his whole time to bee-keeping. Had he lived, as Mr. Gill says, he would have been a great leader among practical honey-producers.

We hope very soon to publish a biographical sketch and picture of our departed friend and brother.

* * *

A Handy Bee-Tent is shown on the first page this week. Mr. John Newton, to whom it belongs, had this to say about it in the Bee-Keepers' Review:

> The engraving is of the bee-tent used in my apiary; and I often wonder why so few bee-keepers use tents when they save so much time and excitement in the bee-yard. I find the bee-tent one of the most useful things about the yard, and I would not on any account do without it. It is built very light, so that it can be easily carried around, and when through with, it can be closed up and put away.
>
> You will see by the engraving that it is made of very light material. The corner posts are 1x1½ inches, made of gray elm, so as to make them strong and light. The bottom and top bars are of pine, and of the same dimensions as the corner posts. The frame of the hinged top and the braces are made of lighter material.
>
> The tent, when open, is 5½ feet high, 3 feet wide, and 4 feet long. It is hinged together at each joint, the braces shutting to the inside when closed, and is held together by means of straps at the corners. The top frame fits inside the frame-work of the tent, being fastened down with two hooks inside the tent, thus holding the tent open and in

position. In the engraving the top is shown thrown back. The bar at the back of the tent holds the bottom open by a sliding strip of strong-wood which slides on screw nails. The bottom side-bars are used as handles for carrying the tent from hive to hive, The covering is of strong cotton, except a piece of wire-netting 18 inches wide across each side, which is used to make it lighter and airier when working inside. The front has two widths of cotton, and when not pinned back they fall down and lap over each other, thus closing the doorway. When the tent is closed it is 5½ feet by 4 feet by 6 inches.

Now as to the uses to which the tent is put. First of all, it is used in the early spring for going through hives, clipping queens, etc., so as to prevent robbing. Then I find it very handy in the swarming season, to keep swarms from mixing up. If one or more swarms are out, and another starts to issue, I place the tent over the hive and let the swarm go to the top of the tent. If the queen is clipped I step inside and cage her. After the other swarms are settled I throw open the top and let the bees that are on the outside return home.

During the last extracting the tent is used, if no honey is coming in from the fields, so as to save time and excitement in the yeard. Whenever the bees are "looking for trouble," if the tent is used they can't find it.

JOHN NEWTON.

[In queen-rearing, where nuclei must be opened day after day regardless of annoyance from robbers, a tent is a great convenience. I first made one about 6 feet square, and the same in height. It had a door at one corner, and was covered all over with mosquito-netting. But it was too large and unwieldy, and offered too great temptations to sportive winds. I had to have a guy rope at each corner, with a stake to drive in the ground, and thus anchor it when I was not using it, or I never knew where to find it when I needed it again. One day there was such a strong gale, in advance of a thunder-storm, that it picked up Mr. Tent, guy ropes, stakes and all, and smashed it all in a heap against the side of the barn. Then I got one of The A. I. Root & Co.'s tents that fold up umbrella fashion, and used that for several years when it was needed. By the way, I often used it in the way Mr. Newton mentions, viz., as a swarm-catcher. If a swarm was on one of the apple-tree boughs, or in the air, and another began coming out, I clapped the tent over the hive where the swarm was coming out, and it answered every purpose of a swarm-catcher. It showed only too clearly how perfectly a man could be master of the situation if he had enough swarm-catchers scattered about the yard.

You will notice a cute little dog making himself at home in the doorway of the tent. Well, there is a story that goes with that dog. "Bobbs," as the dog was called, had quite a choice collection of tricks at his command, and was a close companion and playfellow of Mr. Newton's 4-year-old boy, who couldn't bear to hear a word said against "Bobbs." In talking with the boy, I asked him his age. "Four years old," he replied. "But the dog isn't so old as that, is he?" I said. He shot me a quick glance that seemed to say, "Now, you're running on Bobbs;" he thought a moment, then reluctantly admitted, "No, he isn't, *but he used to be older!*"—EDITOR REVIEW.]

* * *

The Midsummer Fair at Lake Geneva, Wis., announced on page 484, was held July 22 and 23, and was a big success. There were several thousand people in attendance, and the expected proceeds were about $5000. It was held by, and for the benefit of, the Lake Geneva Fresh-Air Association, an organization in the interest of the poor children of the city. The exhibits in the various departments were most excellent, there being departments of live stock, poultry, dairy, apiary, farm products, dogs, art and fancy work, etc. The Editor of the American Bee Journal was present the second day of the Fair, and acted as judge of the apiary department, with the following results:

Best case of comb honey—1st premium, Miss Emily Hatch; 2d, Miss Emily S. Rumsey; 3d, H. C. Buell.

Best extracted honey in jars—1st, Wm. M. Whitney; 2d, S. C. Ford.

Best 1-frame nucleus hive with bees—1st, Emily S. Rumsey; 2d, Wm. M. Whitney.

Best general exhibit—1st, Wm. M. Whitney; 2d, S. C. Ford.

Messrs. Whitney and Ford had a very good display of bee-supplies besides honey, etc. Mr. Whitney also had bee-literature, a straw hive, etc. He had almost a constant stream of visitors to whom he kept telling the story of bee-keeping until his vocal organs were almost impaired. Among his bee-books was not only a copy of the very first edition of "Langstroth on the Hive and the Honey-Bee," but it was the author's own copy, in which every other leaf was a blank one, and on many of which the great Father Langstroth had with his own hand written notations and comments for a future edition of his book. Mr. Whitney very kindly loaned us this treasure, and later on we hope to find time to review it in these columns.

The Lake Geneva Fresh-Air Association is to be congratulated upon the success of its first Fair. Much credit is due Miss Emily S. Rumsey for her untiring efforts and self-sacrificing devotion to the work.

Contributed Articles

Symbiosus—Bees and Legumes.

BY PROF. A. J. COOK.

IT was a common belief, a few years ago, that a college man, or one who had had the full benefit of a college course, was not so well fitted for business as one who came to the work "unfettered" by such training. He was often referred to as an "educated fool." There was such a unanimity in this opinion that, without doubt, it had some basis in fact. "The book farmer" was pointed at in those days with the finger of scorn, or at least with derision. This is no longer true. All kinds of business to-day reach for the college graduate. Education as now built up in our colleges is nowhere thought to disqualify a man for any kind of work, mental or physical. Indeed, some of our great corporations make this a *sine qua non* in selecting the men that are to be employed, and some are even arranging to have men taught in college, with a good general course, before specialization commences preparatory to engagement by them.

What has influenced to bring about this great change? Without doubt it has come through the introduction of science teaching. Science, as now taught, deals with things, and as the student learns to handle and observe the things of the laboratory, even from the most minute micro-organism to the very mountain that he scales, he is made quick to take hold of all of life's problems. and in so doing to grasp the lever of life by the long end. The young man to-day, if at all bright, can get a good college education, and if wise he will get it, and he will have a good, large amount of the best scientific culture mixed all through the course.

I am led to this long introduction by the result of an examination of a splendid class in botany a few days since. I asked for a good illustration of the law of Symbiosus, or of the law that organisms often dwell or act together, for the mutual good of both. Two of the answers I am sure will interest our readers:

"Bees in collecting honey afford a good example of this law. They secure from the flowers the nectar which is cane-sugar, and which is digested by them, or changed into reducing sugar, partly in their stomachs and partly in the honey-comb cells, through the action of a ferment which they add to it as it is gathered. This makes a necessary and most admirable food, when mixed with the proteid food-elements of the bee-bread, and supports the larvæ or brood and the mature bees. Nor do the flowers receive a less benefit. The bees, as they plunge into the flower-tube, become dusted with pollen, and, as they push on to the next blossom, they carry this pollen to the stigma of that flower, and so the bloom is cross-pollinated. Research has proved that the flowers will not be able to seed when pollinated with their own pollen, and thus we may say that the bees in these visits become the very saviors of the species of plant whose bloom attracts them. Thus the flower feeds the bee, and the bee saves to the world the flower."

Another student gave another case as interesting and equally as apt an example of Symbiosus:

"We have in the legumes, and the bacilli that live and work on their roots, a good example of Symbiosus. These tiny organisms attack the roots of the pod-bearing plants, and cause tubercles to form, in which they live, and feed and grow; thus these root-growths furnish them home and food. In turn they breathe in the nitrogen from the air as we breathe the oxygen, and combine this in their cell-structure so that the host-plant can use it. This host-plant, large as it is, can not take the free nitrogen, but must have the same in combined form. Thus it gets a big return for the home and the little food that it gives its guest, for it gets a large amount of this combined nitrogen, which is the very substance of its cell-structure. This part of the process even goes further, as the legume, when it dies, leaves a great excess of this combined nitrogen in the soil for other plants that may come after it. Thus we have explained the well-known fact that a crop of clover or other legume will often convert a sterile soil to a fertile one. In this mutual aid of the legume and the minute bacillus we have one of the best illustrations of the law of Symbiosus."

ALFALFA AS A BEE-PASTURAGE.

It is well known that Nevada, Arizona, and the San Joaquin Valley, in California, have excellent bee-pasturage in the great alfalfa fields of those sections. As this crop is irrigated it is always vigorous, and unless the cold winds or some other meteorological interference occurs, the honey crop is almost a sure thing. Alfalfa honey is also of the best.

I have wondered why it might not pay in these years of extreme drouth in Southern California, to move the bees from the sage mesas to the alfalfa fields. We have about here large areas of alfalfa, which now must waste its fragrance on the desert air, as far as the bees and the honey-product go.

Mr. Mendleson, of Ventura county, has often found that it paid to move his bees to the bean-fields, and there it often happens that the beans fail to respond with the generous flow of nectar. It is possible that the alfalfa would do the same, though I believe that it would give more certain returns. I am not sure how this would work, but it would be well worth while to make the trial. The alfalfa would also profit by the visits of the bees, as we often raise the seed, and bees are necessary if we would secure a full yield of this valuable crop. We have in many sections of Southern California large fields of this valuable hay and forage crop.

Los Angeles Co., Calif.

Developing the Home Market for Honey.

BY E. B. ROOD.

I BEGAN keeping bees with 22 colonies five years ago, in Manatee Co., Fla., having had little previous experience.

I supposed that I must find a market in the large cities, being led astray perhaps by such statements as that made by Mr. M. A. Gill, at the Denver convention in 1902: "If you are going to be a honey-producer produce some, and when you get it produced sell it to some one who likes to dabble with pints and pounds, and turn your attention towards producing some more." Good enough advice perhaps for Colorado, but very poor for any section of our country I know of east of the Mississippi.

I made my first shipment to New York, but the price was so low that I decided that I must try to find a market elsewhere, and so I began looking up the situation in our near-by cities. I found considerable honey in the fancy grocery stores, put up in neat glass jars shipped from the Northern wholesale houses. Some of this may have been of doubtful purity, and the trade on it was small. The grocers were first suspicious, but as we got acquainted and they were convinced that my honey was pure, my sales increased from 1000 pounds for 1900 to 10,000 in 1903, and the end is not yet.

I began with the 1 and 2 pound Muth jars. The corks are unsatisfactory, for even when carefully waxed they will leak a little in hot weather; but I can find nothing that suits me better, taking price into consideration, so I stick to them. In the meantime I am looking for a better package.

The editor of Gleanings in Bee-Culture suggests that if a grocery trade is once worked up, orders will come in regularly from it without further effort, but I find that this does not hold good in practice. The grocers buy practically all their goods through drummers, so much so that they neglect to keep up stock unless "drummed." It seems necessary to call upon them about every 60 days to sell and to make collections in order to do the maximum amount of business. This means that your market must be near home, or the expense will be too great.

We have had some unfavorable seasons, too wet or too dry, and my demand is exceeding my supply, so that I am buying some honey every year.

I mention my success in selling honey (I believe I have driven every bottle of adulterated goods out of my territory) because I think it can be duplicated in scores of cities, at least in the South, as I have found several where little honey is sold. I am convinced that in order to get grocers to sell extracted honey successfully, whether liquid or granulated, it must be put up for them in such retail packages that they can deliver it to their customers without fuss or trouble. One experience with a barrel, or even a can of partially candied honey, will deter many of them from buying for a long time. Comb honey is of uniformly good quality, and being in a small package is easily handled, which, I think, accounts in a large measure for its popularity. I produce only extracted, because I think at the price I get it pays me better, and then comb honey is very difficult to keep in this damp climate.

To conclude, I can hardly see why over-production need bother the average bee-keeper who produces a good quality of honey, puts it up attractively, and pushes its sale with the same intelligence required to sell soap, or cornstarch, or blueing, or any of the salable articles of trade. The producer ought to be the best salesman in the world, for he knows that his honey is pure, and also a thousand details about the business that always interest and convince men.

Manatee Co., Fla.

Rearing Queens—A Method Described.

BY THOMAS BRODERICK.

MR. HARRY GREEVES, on page 350, expresses the wish that some one would start up the queen-rearing discussion again. For the benefit of Mr. Greeves and others who are interested in this all-important subject, I will briefly describe my method of rearing queens, which I feel certain will greatly simplify their rearing, inasmuch as it enables the bee-keeper to do away with all fussing with queen-excluding metal, the uncertainty of the swarming fever, or waiting for queens to get old and be superseded naturally; and best of all, reduces the cost.

I have thoroughly tested all of the methods given through the bee-papers, and know of the merits and demerits of queens reared by each and all of them. For a long time I reared my queens by the Alley and Doolittle methods, as I considered them the simplest and best, but I became dissatisfied at times with the Doolittle method, especially when reared above or behind queen-excluding metal.

The Alley method will produce good queens every time when conditions are right, but it is too costly to suit me. The making of a colony queenless, and keeping it so for a week or ten days, means dollars and cents, and if late in the season it may mean death to the colony the following winter. However, we must have good queens regardless of cost, and I would rear them by the Alley method, too, if I had not worked out the following:

When settled warm weather has arrived, and colonies have become strong, i. e., one hive-body well filled with bees, with brood in all combs excepting the two outside ones, and large numbers of young nurse-bees on hand; then, and not until then, should any one attempt to rear queens. When bees are in this condition, with plenty of honey and pollen coming in from the fields, I am then ready to begin queen-rearing operations, provided queens are needed thus early.

I go over the apiary and select a good, strong colony, preferably hybrids, one which has a good, prolific queen not more than two years old—still better if not more than one year old. I hunt out this queen, catch her, and with a sharp pair of scissors clip about ¼ of an inch off one of the large wings and liberate her among the bees again, and close the hive. In about four or five days you will find eggs in queen-cells.

Now prepare a batch of cell-cups, *a la* Doolittle, minus royal jelly, and take them along with you to the colony, destroy the cells the bees have started, hunt out a comb containing small larvæ, and with a goose-quill toothpick, that has been previously polished on a stone to take off sharp edges, lift out larvæ that are about two days old, as near as you can judge, and place one in each cell-cup without royal jelly—just the dry cup. Now place the comb with cell-cups in the center of the brood-nest and leave it for a day or two, when you will find that just as many, or more, cells have been accepted as if you had put royal jelly in them.

Now these cells have been shaped up by the bees to suit their liking, and there is considerable royal jelly in them, lift out those old larvæ that you first put in, and replace them with the smallest larvæ you can find from your best breeding queen, and place the comb back in the hive where you took it from. Those cells will be cared for and fed from the very moment you place them back in the hive. This I consider very important, and must take place if we are to have good queens every time. And this leads me to say, that with any method when artificial cell-cups are used, unless given to bees that are hopelessly queenless, they must be grafted a second time if you want good results. The reason is plain to be seen—the cells are unnatural in every respect, and in the majority of cases remain unnoticed for several hours, and the nature of them is only discovered as some bee out of curiosity pokes her head into one of them, when she at once spreads the news. But, alas, it is too late, they have received a setback from which they will never recover, and the omission of this very thing is, I believe, the principal reason why so many bee-keepers received or reared queens that were not satisfactory, thereby causing the queen-breeder and cell-cup methods to be condemned. I am firmly convinced that the grafting of cells a second time has paid me enormously—yes, better than any other work I ever did in the apiary.

Now, lest some may think that a queen treated as I have described will be of little good from the standpoint of egg-laying, and consequently a run-down colony, to such I want to say that a queen treated in this way will, with the exception of a few hours when first clipped, lay just as well as ever. That has been my experience for the past four years; and, further, the colony will produce just as good results in either comb or extracted honey as if you never touched the queen. And this colony can be kept building cells during the whole season, as I have done repeatedly. In such a case you must examine every comb in the hive once in every twelve days or two weeks, and cut out any cells that may be started on them.

When rearing queens in this way it is just as necessary to feed the colony in times of scarcity as it is with any method. Of course, the bees are trying to supersede their queen, and will carry on the work of cell-building just as long as there is anything in the hive for them to live on, but if there is no honey in the fields feed by all means; also feed the colony containing your breeding queen, so that any larvæ taken from it will not have received a setback from being fed sparingly. As in times of great scarcity bees feed larvæ just as little as possible and have them live, it seems almost unnecessary for me to say that larvæ taken from a colony when in this condition are entirely unfit for queen-rearing purposes.

Before closing I want to add a few don'ts: Don't try to rush matters by attempting to rear queens before your colonies get strong. Don't wait until the season is nearly over, and drones nearly all killed off; the bees know when the drones are killed and winter is close by, and seem to prefer their old queens rather than take chances on getting a young one fertilized. Don't winter a queen that has been clipped and at the head of a cell-building colony all summer; quit off in time to allow a young queen to become fertile and laying, and use another colony next summer.

The rearing of queens just when and where I wanted them, and in almost any numbers, with the colony storing in the sections just as fast as any other—no waiting for the swarming fever or old age to overtake some queen—is something that has given me great pleasure. That I believe it will be so with others is my reason for taking the trouble to write it out.

Cayuga Co., N. Y.

Convention Proceedings

Southwestern Ohio and Hamilton County, Ohio, Convention.

The members of the Southwestern Ohio and Hamilton County Bee-Keepers' Association elected the following officers at the last regular meeting, on June 17:

President, Henry Shaffer; Vice-President, Joseph Riestenberg; Secretary, Henry Reddert; Treasurer, C. H. W. Weber. Executive Committee: John Sommers, Chas. Weber, Benj. Kolks, Harry Denning, and Fred Eggers. Our organization is increasing rapidly, one of the main features being "bee-keeping from a scientific standpoint," hence the enthusiasm displayed at the meetings during the "Welfare" of the organization. We are incorporated under the laws of the State of Ohio, having received our charter from the Secretary of State, June 17. Enclosed you will please find the Constitution and By-Laws.

HENRY REDDERT, *Sec.*

[The Constitution and By-Laws referred to above we publish herewith, as they may be a help to some other bee-keepers' associations, either already existing or in the process of organization:—Editor.]

CONSTITUTION.

The Constitution of the "Southwestern Ohio and Hamilton County Bee-Keepers' Association" shall read as follows:

ARTICLE I.

Sec. 1.—The name of this Association shall be the "Southwestern Ohio and Hamilton County Bee-Keepers' Association."

Sec 2.—Its object shall be the promotion of apiculture in all its branches.

Sec. 3.—This Association shall hold its annual meeting for the election of officers the last Monday in August each year, at such place as the Executive Committee sees fit to select. Each member shall be notified of the annual meeting for the election of officers and other business of importance. Members at a distance may vote by proxy for the election of officers and other important business after being duly notified by the Secretary four weeks before the meeting takes place. The regular meeting shall convene every three months, and business of importance shall be laid on the table for the next meeting, to give the members at a distance not able to attend every meeting an opportunity to cast their vote (after being notified) by proxy.

Sec. 4.—The officers of this Association shall consist of a President, Vice-President, Secretary, Treasurer, and five members for Executive Committee. These officers shall be elected for one year, or until their successors be duly installed.

Sec. 5.—A quorum shall consist of seven members of the Association.

Sec. 6.—Any bee-keeper, or those interested in apiculture who never adulterated honey, or induced others, or endeavored to induce others to do the same, are eligible for membership. Every applicant for membership shall file a petition in writing provided by the Association, adding 50 cents for yearly dues of membership, which money shall be returned if applicant is rejected. If his petition is reported favorable by the Association, he may become a member at once, but if objections are raised he shall be balloted for. A ballot-box shall be provided by the Association for this purpose. White balls elect, black balls reject. If two or more black balls are cast the applicant is rejected. If one black ball is cast the vote shall be repeated. If the result be the same, the member casting the black ball shall state his objections, and if approved by the members present the applicant is rejected. All measures before the members of the regular meetings must be approved by two-thirds of the members present. Yearly dues for membership shall be 50 cents, payable in advance.

Sec. 7.—On request of seven members, the President shall call a special meeting.

Sec. 8.—All officers shall be elected by ballot.

BY-LAWS.

Sec. 1.—Dues shall be 50 cents for one year, payable in advance.

Sec. 2.—Bills payable must be approved in open session.

Sec. 3.—The Constitution and By-Laws may be amended only at the annual meeting by a two-thirds vote of the members present. All amendments must be made in writing and presented to the Secretary four months before the annual meeting convenes.

ARTICLE III.

DUTIES OF OFFICERS.

Sec. 1.—The President shall preside at all meetings, appoint committees, sign all orders on the Treasurer, and act as chairman of the Executive Committee.

Sec. 2.—The Vice-President shall proceed with the duties of the President in case the latter be absent.

Sec. 3.—The Secretary shall keep a true and accurate record of all proceedings of the Association; receive all moneys and receipt therefore; pay the same to the Treasurer, take receipt for same, and countersign all orders on the Treasurer; conduct the general correspondence; notify all committees relating to their duties, and notify members in regard to the proposed business to be transacted at regular and special meetings; keep a record of the names and addresses of the members, and make an annual report of all receipts and disbursements of the ensuing year. When his successor is elected he shall deliver to him all property of the Association in his possession.

Sec. 4.—The Treasurer shall receive all moneys due the Association from the Secretary, and give receipt therefore; cash all orders duly signed by the President and Secretary; make an annual report of all receipts and disbursements, and deliver all property of the Association to his successor in office.

Sec. 5.—The Executive Committee shall audit the books of the Secretary and Treasurer, and report the same to the Association at the annual meeting; have charge of all interests of the Association during the intermission, and act for the Association in case of emergency.

RULES.

Roll call of officers.
Reading of minutes.
Business report of committees.
Election of officers.
New business.
Roll call of members and dues.
Welfare of the Association.
Adjourn.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Yellow Sweet Clover, White Sweet Clover, Motherwort, Etc.

Miss Wilson:—I see you ask me a few questions in regard to yellow sweet clover. Some of these I can answer readily enough, and to some of the others I will have to say, "I don't know."

I noticed the first opened blossoms of the yellow variety May 26 this year, while it was July 4 before the white began to spread its bloom.

They are magnificent honey-plants, both of them. I do not think that the honey from the yellow variety has such a pronounced sweet-clover taste and color as has that of the white, but it is not easy for me to tell about that, as I get a blend of the two.

The bees have been working through June on the yellow kind, also on alfalfa and motherwort. By the way, motherwort is a good, old stand-by here.

Now the bees are busy on motherwort, yellow sweet clover, and white sweet clover. The yellow sweet clover is slacking up in its blooming now, to mature an enormous lot of seed. After that it will have a sort of secondary blooming-time—as is the way with the white sweet clover, also. Here we do not use either kind for fodder, prefering alfalfa. But, beyond a doubt, they have merit as fodder-plants. I know that our cattle and horses eat both kinds very readily, and that it is useless to scatter seed of either in pastures, hoping to get nectar therefrom.

The yellow variety is of more slender growth than the white. It is also of trailing habit when allowed to follow its bent. An individual specimen will spread out over the ground like a beautiful carpet, while the white variety, whether alone or in group, grows erect and vigorous. I have some six feet in height, and still growing. I believe that the yellow is even more lavish of its blossoms than is the white; in fact, I know of nothing else with such a capacity for turning itself into a mass of fragrant bloom.

You are right about the record, Miss Wilson. It is not advisable to dispense with it, and I usually keep one, but I was from home for nearly two months last summer—to the detriment of my bee-keeping and other things. I am making a big effort to keep the run of the colonies this year, and to let all things be done decently and in order. It is up-hill work, though, with all I have on hand, and if it was not that the bees are a pleasure to me I surely would give them up. I take them as a *recreation*, but I feel this summer as if in danger of having too much of a good thing.

There are several other matters on which I would like to touch.

I want to give in my testimony in regard to those bee-hive chickens, but for the present I must close.

Custer Co., Nebr., July 13. A. L. AMOS.

Sweet clover bloomed nine days earlier here this year than with you, but that was the very first bloom.

Thank you very much for such full information regarding the two sweet clovers.

Hatching Eggs Over Bees.

Apropos of your comments on hatching hen's eggs in bee-hives (page 455), I would say that many people about the country do accomplish the incubation in that way—some people indeed who do not keep bees. From my own experience and observation I know that it can be done. This, therefore, makes another direct report as well as J. G. Norton's, and as much to the point as his is.

Albany Co., N. Y. S. DAVENPORT.

Bees Doing Well—Poor Queen, Etc.

DEAR MISS WILSON :—Bees are doing well now considering the rains. Not much surplus honey yet, but fair prospects if it stops raining. Several prime swarms yet to come, while some of the first hived in 10-frame hives are almost ready for supers. I have been making frames, both deep and shallow, and have fastened in all the foundation this year. We use the Parker machine for sections and shallow frames. With it one can fasten on warm days if necessary.

We moved our bees during fruit-bloom to a little nook sloping eastward, sheltered by woods on the west and north, and a large meadow on the south. On account of the tall trees near, father put bunches of old combs tied to sticks at convenient places about head high, thinking swarms would alight (or "roost," as 4-year-olds would have it) on them, but they chose high post-oak branches.

One colony has been weak all spring. We have cleared them of moth several times, and given them frames of brood from other hives five or six times; a few cells of brood on some of the combs makes me think they have a *poor* queen. Would it be all right to transfer the frames to a new hive—cover and bottom-board—setting it on the old stand and hiving an after-swarm in with them?

Last winter was not so hard on bees here as at other places; one of our neighbors had one or two colonies die in the spring, but so far as I know all others wintered all right.

Hickory Co., Mo., July 5. ANN F. KELLY.

You are probably right in regard to that colony having a poor queen, and the first thing to do is to find her and kill her. Then after the colony has been queenless a day or two, unite with it the first after-swarm that issues.

No need to transfer them to a new hive unless there is some objection to the old hive.

"The Hum of the Bees in the Apple-Tree Bloom" is the name of the finest bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us *one new* yearly subscription to the American Bee Journal at $1.00.

See Langstroth Book Offer on another page of this copy of the American Bee Journal.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Reducing the Number of Colonies.

I have 30 colonies of bees and would like to reduce them to about 20, before they go into winter quarters. How should I proceed? About 5 of the colonies are very weak, through persistent swarming. IOWA.

ANSWER.—Unite just as soon as surplus storing is over. Better still, just a little before that time. Take the 10 weakest colonies and set them over the next 10 weakest. It will be better to kill one of the queens two or three days before uniting them. Between the two hives put a sheet of manilla paper, or three or four sheets of newspaper, making in the paper a hole large enough for one bee to pass at a time, seeing that the hole comes over the space between two top-bars, so there will be no hindrance to the passage. About three weeks later remove one story, putting in the story that is left all the brood and the fullest frames of honey.

A Honey-Dew Affliction.

My bees are working on honey-dew, the trees just glistening with it; the leaves look as if they were varnished, and in the morning when the dew is on the bees work "to beat the band." I have several hundred pounds of it in the supers. It is bad looking stuff, and not fit to eat or sell. What can I do with it? Will it do to feed bees? IOWA.

ANSWER.—It will do to feed it to the bees in the spring or any time when they will use it for brood-rearing; but don't give it to them for winter stores. Such honey may be sold for baking or mechanical purposes, or it may be made into vinegar.

Queen Progeny—Testing Queens—Keeping Queens Over Winter.

I Italianized 3 colonies last August with red clover queens. One of these queens produced nearly all black drones, and I bought her as a tested queen. Her bees are three-banded.

1. Why did she produce black drones?

2. I have reared some nice queens, and find it difficult to test them. The young bees look very dark, but they nearly all show the third band. Are they hybrids?

3. Could those dark-looking drones be the cause of such dark bees?

4. One of those queens I bought last August superseded about the middle of June. This was a select-tested queen, and her drones were very nicely marked. Now the tested queen is trying to supersede also. This gives me a chance to rear some more good queens. What is the cause of these queens superseding so soon?

5. Will it do to leave the tested queen alone in the hive, or is she likely to die before spring?

6. Will the bees expel the drones if I cage the queen?

7. How can I keep a dozen queens over winter? I would like to keep them in one hive, if possible.

8. How would it do to make cages, put candy in them with the queen and young bees, then put these cages in the middle of a strong colony and make the colony queenless?

Will the bees feed the queens all winter in case they run short of candy?

Perhaps you will say that the cluster will move about and leave the queen exposed to the cold. To prevent this I will use only 2 or 3 frames of honey, causing the cluster to stay, the remaining space being filled with empty combs. My frames are only 14x8¾ and hold a little over 4 pounds, so I will have to look after them on the first fine day that comes. OREGON.

ANSWERS.—1. A tested queen is one whose worker progeny have 3 bands, and no attention is paid to the drones. The queen herself may be very dark or light and so may the drones. Just why, I don't know. If the workers have the three bands, that's all you can require of a tested queen.

2. If they have the three yellow bands they are all right. The leather-colored Italians are generally favorites, although on the dark order. A few workers without the yellow bands are not always conclusive proof of impurity unless so young that you are sure they never have flown from the hive; because there is more or less mixing from other colonies. But it would be nothing else than you should expect, to have your young queens impurely mated if blacks or hybrids are within a mile or two of your apiary.

3. Not necessarily; drones are very variable, even in the purest stock. But as said before, with black bees all around you, your young queens are likely to be impurely mated.

4. I don't know; although a queen which has been through the mails is likely to be superseded sooner than others.

5. As the bees are trying to supersede the queen, she would likely be put out of the way as soon as a young queen is reared to take her place. If you are anxious to keep her over the winter, let her be in a nucleus for a time, strengthening up the nucleus in time for winter, destroying any queen-cells that may be started. Even then there is some danger that she may not winter over, if the bees seem bent on superseding her.

6. The caging of the queen, so far as it would have any effect in that direction, would make the bees more inclined to retain the drones.

7. I don't know of any way in which you are likely to succeed satisfactorily. Perhaps the nearest to it would be to have two or more nuclei in one hive, making very sure that no bee could get from one nucleus to another without going outside the entrance.

8. For a very small sum I'll guarantee that every queen you attempt to winter in that way will be dead before time to fly in spring.

◆

Size of Brood-Frames—Chaff-Hives.

1. Are the Hoffman and the Langstroth brood-frames the same size? and which kind do you consider the best?

2. Would a 10-frame hive, using either of the above-named frames, be large enough to winter a colony without a second story, provided the frames were full of honey, or nearly so? or what size would I need? I would like to adopt a hive of that capacity. I now use frames 13¼x7 inches deep, and have to use a second story for wintering.

3. Should the chaff in chaff-hives be removed every spring and repacked in the fall? or is it all right after being once put in?

4. What ought to be the inside dimensions of a 10-frame hive, using Hoffman or Langstroth frames? and how deep using reversible bottom-boards?

5. I am thinking of making my own hives, if I cannot buy them at a reasonable price, with double walls, having an air-space of two inches between the two walls without packing, and then pack the hives well in straw in wintertime. Would they be better than a single-walled hive? Only the brood-chamber should be double-wall, using Hoffman shallow frames for tiering up. NORTHERN INDIANA.

ANSWERS.—1. The Hoffman frame is really one form of the Langstroth frame, and the size is the same. The name Langstroth, however, is generally applied to the loose-hanging frame. Between that and the Hoffman it would be a little hard to choose. After using many of both kinds I have discarded both and prefer the Miller.

2. Yes, it would be plenty large.

3. In the regular chaff hive the packing remains permanently.

4. The 8-frame hive is 12⅛ inches wide inside, which width gives room for a dummy. A 10-frame hive to be used in the same way must be 14⅞ wide, but they are quite commonly made narrower than this so that the dummy cannot be used. I should prefer a dummy. Depth, 9½ inches.

5. Only trial of the two kinds side by side would prove which is the better in your hands.

◆

Yellow Jacket—Swarms Going Back—Prevention of Swarming—Clipping Queens in Criss-cross-Comb Hives.

Enclosed please find a wasp or bee, or whatever it is. I found it in a hole in the ground.

1. What is it? Does it store honey when domesticated?

2. This year I caught several swarms, and I had no sooner caught the swarm than a few of the bees would go back to the parent hive a few at a time. Have you ever had such experience? and what was the cause?

3. What method do you think would be best for me to pursue to prevent swarming, so as to produce the most possible honey? I hear of the "shook swarm" method, clipping the queen's wings, and several other methods, but are they now in practical and daily use?

4. How can you clip the wings of a queen where the combs are built crisscross? WISCONSIN.

ANSWERS.—1. It's a yellow jacket and could not be induced to store honey.

2. I don't think I ever had just that experience, and I don't know the cause. If the queen should not go with the swarm, bees would return to the old hive, but then all would go.

3. Shaking swarms might work very well for you. It is certainly practical, and has been practiced to a large extent by experienced bee-keepers. In reality it is little else than making the bees swarm at your own will a little before they would swarm naturally, with some advantages over natural swarming, as keeping a stronger force together.

4. You would have to drum the bees out, so as to catch the queen.

◆

Probably Bee-Paralysis.

What is the matter when shiny, hairless, wingless bees that are pushed out of a hive by the other bees? Are they diseased, or are they robbers? IOWA.

ANSWER.—Most likely paralysis, although the bees are not usually wingless.

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

FROM MANY FIELDS

Bees Doing Well on Sweet Clover.

We have had so much rain so far this season that our bees did comparatively nothing till sweet clover blossomed. Now they are doing well.

JOSEPH SHAW.
Chase Co., Kans., July 18.

Robbing—Good Honey-Flow.

Yesterday I had by accident a serious attempt at robbing in my bee-yard. Thousands of bees had effected an entrance into the hive before I discovered them. Then I closed every avenue of entrance or exit except a small hole at the entrance of the hive, and covered and surrounded the hive with cloths saturated with crude carbolic acid. The robbers soon dispersed.

Frequent rains are prolonging the honey-flow, which has been very good, although it did not commence quite so early as usual.

My colonies are dangerously near numbering 200 at this writing. I have not had so much swarming as I had last season.

EDWIN BEVINS.
Decatur Co., Iowa, July 19.

Southerner's Sojourn in New York.

On April 28, I left Watauga Co., N. C., for the home of James McNeill, of Columbia Co., N. Y., to assist him in apiarian duties for the season.

We took the B. & E. train at Butler, Tenn., and as we rode down the beautiful Watauga, which, in the Indian vernacular, means "Beautiful River"—and beautiful it is—I thought of the times I had slaked my thirst from her fountain-head, and courted pleasure upon her mossy margin. Down we went as the train sped along, and the river leaped over cataract and cliff on her way to the sea.

We took the Norfolk & Western at Bristol, Tenn., a bustling little Southern city just bubbling over with business. We went by the way of Hagertown and Harrisburg, arriving at Mr. McNeill's on Saturday, April 30. After an introduction to the family, we retired to the kitchen and "satisfied a longfelt want."

Mr. McNeill is a man of about 55, modest, unassuming, and refined. He never has had the good fortune to woo and win a bride. For 15 years he has been a close student of bees and their habits.

He now controls over 300 colonies in two yards. He advocates and uses the 10-frame Simplicity hive, runs for extracted honey, and uses the Bingham knife and Stanley reversible extractor. The honey is conveyed direct from the extractor to a large tank in the basement, which holds over a ton. From this it is drawn into suitable receptacles for shipment. He believes in keeping the best bees to be obtained, so he has procured queens from the leading breeders in the United States. All the queens are clipped in early spring, and a record of each kept on the inside of the cover. In the fall each colony is placed on six frames of well-filled honey or syrup, and packed

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Has an established reputation, because made by a process that produces the **Cleanest and Purest, Richest in Color and Odor, Most Transparent and Toughest**—in fact, the best and most beautiful Foundation made. If you have never seen it, don't fail to send for samples. Working wax into Foundation for Cash a specialty. Beeswax always wanted at highest price. A full line of **SUPPLIES**, retail and wholesale. Catalog and prices with samples free on application.

E. Grainger & Co., Toronto, Ont., Sole Agents in Canada for Dittmer's Foundation.

GUS. DITTMER, Augusta, Wis.

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FANCY COMB HONEY

In No-drip Shipping Cases.

Also AMBER EXTRACTED

In Barrels or Cans.

Quote your lowest price delivered here. WE REMIT PROMPTLY.

THE FRED W. MUTH CO.,

No. 51 WALNUT ST., CINCINNATI, OHIO.

Send for Our 1904 Catalog and Price-List.

OUR HIVES AND SECTIONS

Are Perfect in Workmanship and Material.

By sending in your order NOW, you will SAVE MONEY, and secure prompt shipment.

PAGE & LYON MFG. CO., New London, Wis. U.S.A.

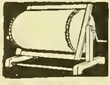
Wanted—Bee-Keepers

To write for our prices on **SECTIONS**. We manufacture them, and are **dealers in BEE-SUPPLIES**. Send for special price and Catalog.

AUG. LOTZ & SON,

24A17t CADOTT, WIS.

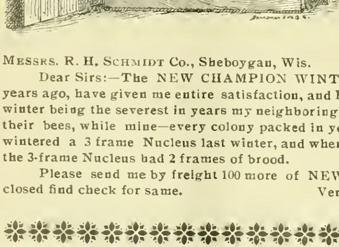
This Lightning **Lice Killing Machine**



kills all lice and mites. No injury to birds or feathers. Handles any fowl, smallest chick to largest gobbler. Made in three sizes Pays for itself first season. Also *Lightning Lice Killing Powder, Poultry Bits, Lice Murder, etc.* We secure special low express rates. Catalog mailed free. Write for it.

CHARLES SCHILD, Ionia, Mich.

Please mention Bee Journal when writing



Don't run any chances by Wintering your Bees in leaky dry-goods boxes, when you can have the **BEST WINTER-CASE** for almost the same price. Write to us stating the amount of cases wanted, and we will name bottom price on our **NEW CHAMPION**. Read what MR. JOHN BODENSCHATZ, of LEMONT, ILL., has to say regarding our Winter-Cases.

R. H. SCHMIDT,

Sheboygan, Wis.

MESSRS. R. H. SCHMIDT Co., Sheboygan, Wis.

Dear Sirs:—The NEW CHAMPION WINTER-CASES which I bought of you four years ago, have given me entire satisfaction, and I am more than pleased with same. Last winter being the severest in years my neighboring bee-keepers lost from 50 to 90 percent of their bees, while mine—every colony packed in your cases—came out good and strong. I wintered a 3 frame Nucleus last winter, and when I took off the winter-cases, April 20th, the 3-frame Nucleus had 2 frames of brood.

Please send me by freight 100 more of NEW CHAMPION WINTER-CASES. Enclosed find check for same.

Very truly yours,
JOHN BODENSCHATZ.

in dry leaves. His winter loss is usually quite small.

Mr. McNeill is a prohibitionist, and has voted that way for 20 years. He edits a temperance column in the Weekly Gazette, and holds up the temperance cause. G. W. McGUIRE.

Columbia Co., N. Y., July 18.

A Report from the Crawford Co., Wis., Apiary.

Being personally in charge at the above apiary here on the Wisconsin River, I have had a good oversight of this field. We had a fair crop of light amber spring honey, a mixture that probably included the nectar of dandelions, raspberries, a small amount of white clover, apple and wild fruits. This honey was clear, of good body, and pleasing flavor. White clover made no showing; although there appeared to be an abundance of plants the bloom was scattering, and what there was did not appear to have any nectar in it. I attribute this largely to the fact that the plants were seedlings. Next year these plants will be due to produce a crop of honey. I have noticed for many years that when we have a general seed crop it is followed by a crop of young plants (if there has been rain enough to cause the seed to germinate), and then we will not have a paying crop from the field until the second year.

Basswood has yielded fairly well, and lasted from the 6th until the 22d of July. One thing is very noticeable, the honey was simply ripe and heavy almost as soon as deposited in the hive; this in spite of the fact that we have had plenty of rain since basswood first began to come into bloom. Basswood, as a rule, is apt to be thin and watery when first gathered, and some bee-keepers have made a bad record for themselves by extracting too soon. This year there will be much thin honey if all fields are like mine. The honey that we are taking out to-day is more like wax than a liquid, and that right on top of the barrel. Who can tell why the honey, or nectar, rather, should be so much heavier some seasons than others?

The white clover honey of 1903 could not be excelled for quality, but the basswood crop of this year need occupy no second place.

Just now the bees are working on catnip, and we look for a crop from autumn flowers on this field. I would certainly dislike to depend upon a field which produced only white clover, as that plant is not one that yields every year. It will be seen from what I have said that we have a chance for four runs, in the following order: Spring flowers, white clover, basswood, fall amber.

Mr. Whitney, in an article in the last issue of Gleanings in Bee-Culture, talks as though it would be right and proper to urge all farmers to keep bees. I think there is very little sense to such an argument. There is no more reason why every farmer should keep bees than that he should raise every kind of crop that is produced on earth, and engage in every other line of work that can be done on a farm. I believe that bee-keeping is a profession, and should be followed by those who make it their calling. The nectar in flowers belongs no more to certain land-owners

Special Notice to Bee-Keepers
BOSTON
Money in Bees for you.
Catalog price on
ROOT'S SUPPLIES.
Catalog for the asking.
F. H. FARMER,
182 Friend St., Boston, Mass.
Up First Flight.

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VIRGINIA QUEENS.

Italian Queens secured by a cross and years of careful selection from Red Clover Queens and Superior Stock obtained of W. Z. Hutchinson. I can furnish large, vigorous Untested Queens at 75 cents; after June 15, 60c. Tested Queens, $1.00; after June 15, 75c. Write for discount on large orders.

CHAS. KOEPPEN,
22Atf FREDERICKSBURG, VA.

If you want the Bee-Book
That covers the whole Apicultural Field more completely than any other published,
Send $1.20 to
Prof. A. J. Cook, Claremont, Cal.,
—FOR HIS—
"Bee-Keeper's Guide."
Liberal Discounts to the Trade.

Take Notice That the New Century Queen-Rearing Co. will have 1000 Queens ready for the mail by April 20. Tested, $1.00; Untested, 75c; 5 for $3.25; 10 for $6.00. Prices on larger quantities and Nuclei given on application. "Prompt service; fair treatment" is our motto.
Address,
John W. Pharr, Prop., Berclair, Tex.
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WE SELL ROOT'S GOODS IN MICHIGAN
Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Beeswax Wanted for Cash.
M. H. HUNT & SON,
BELL BRANCH, WAYNE CO., MICH.

BINGHAM'S PATENT Smokers
25 years the best.
Send for Circular.
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National Encampment, G. A. R.

The Nickel Plate Road will sell tickets, August 12th, 13th and 14th, at $17.75 for the round-trip from Chicago, via direct lines, with stop-over at Niagara Falls and Chautauqua Lake, if desired, within final limit. Also, if preferred, rate of $20.70 between same points for the round-trip via New York City and Boat, with liberal stop-over returning at that point. Tickets good on any train on above dates and also on special train from Chicago at 8 a.m., August 13th. Final return limit September 30th. Meals served in Nickel Plate dining-cars, on American Club Meal Plan, ranging in price from 35 cents to $1.00; also a la carte. City Ticket office, Chicago, 111 Adams St. Chicago depot, La Salle St. Station, cor. Van Buren and La Salle Sts., on the Elevated Loop. Write John Y. Calahan, General Agent, 113 Adams St., room 298, Chicago, for reservation of berths in through standard and tourist sleeping-cars, and other detailed information. 20—30A3t

than do the fish in the sea, or the birds that fly over the land. If the land-owner keeps bees he can not confine them to his own land unless he owns a large tract, in which case he can certainly prevent others from establishing apiaries. As a rule, bee-papers urge many people to go into bee-keeping because it is to their interest to do so, but there is a limit to all things; and short crops, low prices, winter losses, and the good common-sense of many farmers, keep things level, and make it possible for those in the business to sell their product for a reasonably fair price. There is a campaign of education going on all the time, educating the general public to use honey. If this work was not kept up honey would be only a drug on the market at the present stage of the business.

HARRY LATHROP.
Crawford Co., Wis., July 26.

Beedom Boiled Down

Apiarian Display at St. Louis.

Some are inclined to call down Editor York, of the American Bee Journal, for asking, "Who is Mrs. Berthe?" It is our opinion that Editor York was fully justified in asking just as he did. It will probably be remembered by our readers that The Modern Farmer was the first to ask this question. But it is now altogether too late to attempt to make the bee and honey display what it should be, or what the importance of the industry would demand. This position should have been given to some man who has been prominent in the industry for years, who is well known all over the country, and a member of the National Association, and not a woman who is known only in her own State, is not a member of the National Association, and probably never attended one of its meetings. Whoever made this appointment, let his intentions be ever so good, showed either great ignorance of the bee-keeping industry of the country and its commercial importance, or else a total disregard of the qualifications necessary to make an enterprise of this kind a success. We apprehend, however, that no one, let him be ever so well equipped for this work, could have made a success of it under the circumstances. Besides, we doubt if any one well equipped would have accepted the position under the circumstances in which it was given to Mrs. Berthe. As we said in a former article it was doomed to failure from the start. There was no possibility of success, owing to the fact that it was too late to gather together a creditable display of honey and apiarian supplies.—Modern Farmer and Busy Bee.

A History of Alfalfa.

The name alfalfa is of Arabic origin, and has persistently followed the plant through Latin America and into those parts of America into which the Spaniards introduced it. The plant is not unknown in the Eastern United States, having been introduced a number of times from Western Europe, especially

TENNESSEE QUEENS

Daughters of Select Imported Italian, Select Long-Tongue (Moore's), and Select Golden, bred 3¼ miles apart, and mated to Select Drones. No impure bees within 3 miles, and but few within 5 miles. No disease; 31 years' experience. All mismated queens replaced free. Safe arrival guaranteed.

	Price before July 1st. 1	6	12	After July 1st. 1	6	12
Untested	$ .75	$4.00	$7.50	$ .60	$3.25	$ 6.00
Select	1.00	5.00	9.00	.75	4.25	8.00
Tested	1.50	8 00	15.00	1.25	6.50	12.00
Select Tested	2.00	10.00	18.00	1.50	8 00	15.00
Select Breeders						$3.00 each

Send for Circular.
JOHN M. DAVIS, Spring Hill, Tenn.

Diseases of Bees.

I have a positive cure for black brood, pickled brood and bee-paralysis, and have no doubt same treatment will cure foul brood.
Send for particulars to
HENRY ALLEY,
31Dtf WENHAM, MASS.

DEATH TO LICE.

LOSS BY LICE
on poultry amounts to many times the cost of Lambert's Death to Lice—the sure preventive. All loss can be saved and more profit made by the use of this famous powder. It frees setting hens from these pests without harming eggs or chicks. A trial box 10c will prove it. 100 oz., by express. $1.00.
"Pocket Book Pointers" free
D. J. Lambert, Box 707, Apponaug, R. I.

Providence Queens Prove their Qualities
THE HIGHEST.

Now is the time to requeen your colonies for next season's service.
A circular on request.

LAWRENCE C. MILLER,
P.O. Box 1113. PROVIDENCE, R. I.
31A6t

10 CENTS A YEAR.
The Dixie Home MAGAZINE, largest, brightest and finest ILLUSTRATED MAGAZINE in the world for 10c a year, to introduce it ONLY.
It is bright and up-to-date. Tells all about Southern Home Life. It is full of fine engravings of grand scenery, buildings and famous people. Send at once. 10c a year, postpaid, anywhere in the U.S., Canada and Mexico. Six years, 50c. Or, clubs of 6 names, 50c; 12 for $1. Send us a club. Money back if not delighted. Stamps taken. Cut this out. Send to-day. THE DIXIE HOME,
24A48t No. 75, Birmingham, Alabama.

$10,000 WE HAVE JUST COMPLETED OUR TEN THOUSAND DOLLAR BEE-KEEPERS' SUPPLY MANUFACTURING PLANT
—and are ready to do business. Write us for leaflet showing our special Hives and prices. It is the greatest bargain you ever saw.
Mondeng Mfg. Company,
147 Cedar Lake Road.
MINNEAPOLIS, - MINNESOTA.
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Clubbing Offers Here is a *Sample.*

Modern Farmer	$0.50
Western Fruit Grower	0.50
Poultry Gazette	0.25
Gleanings in Bee-Culture	1.00
	$2.25

All one year only $1.00.
Write for those just as good.
Sample Free

NEW SUBSCRIBERS can have the AMERICAN BEE JOURNAL in place of GLEANINGS, if they wish, or all for $1.60. Renewals to American Bee Journal add 40c more. **MODERN FARMER,**
St. Joseph, Mo.

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The American Poultry Journal

325 Dearborn Street, CHICAGO, ILL.

A Journal that is over a quarter of a century old and is still growing must possess intrinsic merit of its own, and its field must be a valuable one. Such is the

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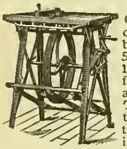

Read what J. I. PARENT, of Charlton, N. Y., says: "We cut with one of your Combined Machines, last winter 50 chaff hives with 7-in. cap, 100 honey racks, 500 brood, frames, 2,000 honey boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.
Address, W. F. & JOHN BARNES,
995 Ruby St., Rockford, Ill.

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8-Frame 1 1-2 STORY Hive for $1.

This hive is rabbetted at corners; is the best $1 hive made. No. 1 Sections, $4; No. 2, $3.50. Shipping-Cases, 12-lb., $8 per 100; 24-lb., $13; 20 lb. Danzy, $10; without glass, 50c less per 100. Dovetailed Hives, Foundation, Smokers, etc., CHEAP. Send for List.

W. D. Soper, R.D. 3. Jackson, Mich.

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15th year, 32 to 64 pages. Beautifully illustrated, up-to-date and helpful. Best known writers. Shows readers how to succeed with poultry. **50 CENTS PER YEAR.** Special introductory offers: 10 months 25 cents, including large practical poultry book free: 4 months' trial 10 cents. Stamps accepted. Sample copy free. POULTRY SUCCESS CO. Dept. 17,
SPRINGFIELD, OHIO, or DES MOINES, IOWA.

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The Rural Californian

Tells all about Bees in California. The yields and Price of Honey; the Pasturage and Nectar-Producing Plants; the Bee-Ranches and how hey are conducted. In fact the entire field is ully covered by an expert bee-man. Besides his the paper also tells you all about California Agriculture and Horticulture. $1.00 per year; 6 months, 50 cents. Sample copies, 10 cents.

THE RURAL CALIFORNIAN,
218 North Main Street, - LOS ANGELES, CAL

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A CHANCE to get
FINE ITALIAN QUEENS.
Beauty and utility. None better.
J. F. MICHAEL R. 1, Winchester, Ind.
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from France, where it is known as "lucerne," but it has never gained a foothold in the East, at least until the last few years. It is now being introduced under its proper name, "alfalfa." At present there is a genuine craze among the farmers of the Eastern half of the United States concerning this plant and some of its more important varieties. It will undoubtedly become the leading hay crop of the East in those sections where soil and climate favor its development.

Alfalfa has always been the standard hay-plant of arid America, where it is grown almost exclusively under irrigation. In those parts of the irrigated section where the soil and climate are favorable, alfalfa is indeed a marvelous plant. In Southern California, where irrigation water is plentiful and intelligently applied, five crops of hay are cut in a single season, while as far north as Central Washington, three good crops are secured, and in exceptional seasons four. In the Imperial Valley, of Southern California, eight crops of alfalfa hay are not unusual for the season of 12 months.

Unfortunately, alfalfa is somewhat particular as regards soil and climate. From its habit of growth it is not suitable to heavy clay soils or soils underlaid by clay hardpan. Its roots penetrate very deeply, and if the soil is of the proper texture it is no uncommon thing for the roots to penetrate the soil from 11 to 20 feet. In exceptional instances the roots have been known to penetrate the soil more than 100 feet. This great depth of root-growth enables alfalfa to draw up stores of plant-food that are unavailable to ordinary crops and gives it great longevity. Many alfalfa fields in the West are yielding good crops after having been cut for 25 years. It is seldom wise to leave a field of alfalfa for so long a time as this, because plants will be killed here and there by trampling, making the stand thinner and allowing weeds to get a start; but as long as the stand is good, and weeds do not bother, there is no object in plowing up an alfalfa field.

For its best development this crop requires a deep, sandy loam, free from standing water within several feet of the surface; abundant water to be preferably applied at stated intervals by irrigation, in not too large quantities; long, hot summers, and winters not too severe. Where these conditions exist alfalfa has no competitor as a hay-producer, but it will thrive on a good many types of soil; in fact, almost anywhere except in stiff clays, light, dry sands and wet soils. The great value of alfalfa lies in its great yielding power, its palatability to stock and the large amount of nitrogen it contains. Most hay crops of this country contain too little nitrogen, and it is necessary for the stockmen to make up this deficiency by buying expensive mill products, such as cottonseed meal, linseed-oil cakes, etc. Alfalfa is one of those plants which draw a large amount of nitrogen from the atmosphere. It enriches the ground upon which it grows as far as nitrogen is concerned, and it has been found that almost without exception a grain crop following alfalfa will make a phenomenal yield.

Some recent experiments indicate that when alfalfa hay is run through a

ITALIAN QUEENS,
BEES AND NUCLEI.

Choice home-bred and Select Imported Stock. All Queens reared in full colonies.

One Untested Queen	$.65
" Tested Queen	.90
" Selected "	1.10
" Breeder "	1.65
" Comb Nucleus (no Queen)	1.00

All grades ready now. Safe arrival guaranteed.

For prices on quantities and description of each grade of Queens, send for free Price-List.

J. L. STRONG,
204 East Logan Street, CLARINDA, IOWA.

Please mention Bee Journal when writing

FOR SALE—in Arizona, on the Gila River, RANCH AND BEES.

150 colonies or more of fine ITALIAN BEES in L. hives, L. and H. frames, extra supers, with combs, 6 frame Cowan Extractor, Tanks, etc. This was a poor year on account of sandstorm at time of blossoming of mesquite; got only 185 cases. The honey from mesquite is water-white. We have W. Moody, cottonwood, willows to build up on in abundance; alfalfa yields good here; also a few of the honey-trees. Ranch of 80 acres, about 20 fenced. Alfalfa in stack worth about $100 to $150; alfalfa in seed, about $300 to $400; pair of fine mares, for work and saddle; two colts, 1½ years, as large as dams; wagon and harness. Adobe of 4 rooms, 2 beds, stove, and cooking utensils—a batch's outfit. Plenty of game; costs nothing for wood; 7 miles from station. New canal being put in. Hot for about 2 months; rest of year finest of fine. A good place for sore lungs. You buy for cash this bargain for $1,200 A good year for the bees will give you 20 to 30 tons of honey. About 15 acres are nearly ready to plant. Good stock country; anything you plant will grow here. Good reascns for selling. For more information, call on or address,

W. F. McDONALD,
30Atf PALOMAS, Yuma Co., ARIZONA.

ANOTHER
CAR=LOAD
of Hives, Sections, and Supplies of all kinds just arrived from G. B. Lewis' Factory, and are ready to fill orders quick. Send us your orders for everything. We have it.

Louis Hanssen's Sons
DAVENPORT, IOWA.

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—IT PAYS—
to order your
Bee-Supplies AND Winter-Cases
NOW, while we can serve you PROMPTLY, and get them at BOTTOM PRICES.
R. H. SCHMIDT CO., Sheboygan, Wis.
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Nickel Plate Excursion

to Boston, Mass., and return, account G. A. R. National Encampment, at $17.75 for the round-trip, from Chicago. Tickets good on any train August 12th, 13th and 14th, and on special train from Chicago at 8 a.m., August 13th. Final return limit September 30th. Also rate of $20.70 for round-trip via New York City and Boat, with liberal stop-over returning at that point. If desired, stop-over can be obtained at Niagara Falls and Chautauqua Lake within final limit. Three trains daily, with modern sleeping-cars. Particulars at city ticket office, 111 Adams St., Chicago, or address John Y. Calahan, General Agent, 113 Adams St., room 298, Chicago, for reservation of berths in through standard or tourist sleeping-cars. 18—30A3t

shredder and pulverized it is almost equal, pound for pound, to bran as a food for cattle. When stockmen learn this it will certainly have a decided effect upon the cost of keeping livestock especially dairy cows, in these sections where alfalfa is grown. Another point that should not be overlooked is the increased value of the rich farmyard manure when livestock are fed rich, nitrogenous food like alfalfa hay.

Although alfalfa is somewhat particular as to soil and climate, or, rather, it should be said, responds readily to favorable conditions of soil and climate, it is at the same time widely distributed in this country. On the Pacific Coast it has been cultivated from Southern California to the British line, and even beyond. It is grown west of the Coast Range of mountains, but in the interior valleys of the Coast States it has proven itself perfectly at home. It has also done well in Louisiana, Mississippi and the other Southern States, and last year a farmer in New York reported five tons per acre. This shows that the range of adaptability of this plant is greater than was previously supposed.

As a honey-plant it is a wonder. Nearly the entire West depends upon alfalfa for the honey crop. Alfalfa yields a honey of the most delicious flavor, and is much sought after by consumers the world over. Every year the alfalfa fields are being extended, and with this extension new apiaries are being established, keeping pace with the new development.—Harry Briggs, in Western Bee Journal.

CONVENTION NOTICE.

National at St. Louis.—The annual session of the National Bee-Keepers' Association for 1904 will be held in September, at St. Louis, Mo.

Sept. 27 and 28 will be devoted to Association work and its interests. We expect many prominent foreign bee-keepers to be present on these days.

Sept. 29, National Day.

Sept. 30, Inspectors' Day. Twenty bee-inspectors from all over the United States and Canada are counted on to introduce and discuss "The Diseases of Bees," etc.

Mr. N. E. France will exhibit, in the Convention Hall, a large map of the United States, Canada, Cuba and Europe. Each State and Country will have a shelf attached to the map with a one-pound sample of each kind of honey produced. Many other exhibits of special interest will be shown.

We expect to see the largest gathering of bee-keepers ever held in this country. A more detailed program will appear later.

GEO. W. BRODBECK, Sec.

Los Angeles, Calif.

Missouri.—The Missouri State Bee-Keepers' Association will meet Sept. 26, in St. Louis, in the same hall to be used by the National Bee-Keepers' Association. Further particulars later. Arrangements are being made for our accommodation by C. P. Dadant, in connection with the National Association.

Wakenda, Mo. W. T. CARY, Sec.

Langstroth on the Honey-Bee

Revised by Dadant—Latest Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

The book we mail for $1.20, or club it with the American Bee Journal for one year—both for $2.00; or, we will mail it as a premium for sending us **THREE NEW** subscribers to the Bee Journal for one year, with $3.00.

This is a splendid chance to get a grand bee-book for a very little money or work.

GEORGE W. YORK & CO.
334 Dearborn Street, CHICAGO, ILL.

WANTED — COMB HONEY, WHOLESALE.—Will buy your crop outright, cash at your depot anywhere in the U. S., if price and quality are right. We have salesmen in nearly every market in U. S., but buy only through Thos. J. Stanley, Manzanola, Colo., our honey-man who spends the season in the West superintending our apiaries and looking after Western car-lots of honey. Address us there direct, stating what your honey is gathered from, what grade, the average weight of section, how packed, color, etc.; quantity, when you can deliver, and lowest cash price per pound properly crated and delivered to your depot. Would like to know about what the freight rate to your nearest city. We believe that our purchases are larger than any other firm or association. Yours for business, **THOS. C. STANLEY & SON,**
29Atf MANZANOLA, Otero Co., COLO.

Cheap Rates to Boston via New York City and Boat.

$20.70 for the round-trip, from Chicago, via Nickel Plate Road, August 12th, 13th and 14th, with liberal stop-over at New York City returning, and also stop over at Niagara Falls and Chautauqua Lake within final limit, if desired. Also rate of $17.75 from Chicago to Boston and return, via direct lines. Tickets good on any train on above dates and also on special train from Chicago at 8 a.m., August 13th. Final return limit September 30th, by depositing ticket. Through sleeping-car service. Meals in Nickel Plate dining-cars, on American Club Meal Plan, ranging in price from 35 cents to $1.00; also service a la carte. Write John Y. Calahan, General Agent, 113 Adams St., room 298, Chicago, for reservation of berths in through standard and tourist sleeping-cars, and full particulars. 19—30A3t

HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, July 19—There is a plentiful supply of honey of all kinds on the market with no sales being made; prices therefore cannot be more than on an asking basis. Very little if any choice to fancy comb, but a large amount of what would average No. 1 is offered at 10@12c; no sale for off grades or damaged lots. Extracted, white, 6@7c; ambers, 5@6c. Beeswax, 27@28c. R. A. BURNETT & CO.

CINCINNATI, O., July 7.—The sales of comb honey, which are made now, amount but to very little. Some fancy comb left from last season finds sales for 12½@13½c. The new is just beginning to be offered and small lots are coming in. Extracted for manufacturing purposes finds a fair demand. I quote amber in barrels from 5¼@5½c; in cans, ½c more; water-white alfalfa, 6½c; extra fancy white clover, 7½c. Beeswax, 28c. C. H. W. WEBER.

ALBANY, N. Y., July 21.—We are approaching the demand for new crop honey. There have been no receipts thus far to speak of—not enough to establish as yet. We could sell a limited amount of light comb at 15@16c. Old crop is well cleared out of this market, and we look for a good trade in honey this season.

Extracted, demand light; some small lots arriving; holding at 7c for white, and 6c for dark.

Beeswax quiet at 28@30c H. R. WRIGHT.

CINCINNATI, July 15.—The supply of honey at the present time is limited, with but moderate demand. New honey is beginning to arrive. We quote our market to-day as follows: Amber extracted in barrels and cans, 5¼@6½c; white clover, 6½@8c. Comb honey (demand limited), 13@14c for fancy and No. 1. Beeswax, 29c. THE FRED W. MUTH CO.

BOSTON, July 8.—Our market on honey, both comb and extracted is practically in a slumbering condition, as there is really no call whatever.

Prices remain as before quoted, but are really only nominal. BLAKE, SCOTT & LEE.

KANSAS CITY, July 25.—The receipts of new honey are gradually growing heavier, although it is a little earlier yet for much of a demand; with good weather, we look for the demand to pick up considerably. Market to day on fancy white comb honey, and No. 1 stock, $2.75 per case of 24 sections. Beeswax moving slowly at 30c per pound. C. C. CLEMONS & CO.

NEW YORK, June 21.—Very little demand for comb honey. Some trade for No. 1 and fancy white, at from 12@13c, while dark and amber are almost unsalable. Extracted is in fair demand, although prices are irregular. We quote from 5@6½c, according to quality. Southern in barrels, at from 50@55c per gallon.

Beeswax more plentiful and prices are gradually declining. We quote 28@29c.

HILDRETH & SEGELKEN.

PHILADELPHIA, July 8.—There is little or no call for comb honey and no sales being made, with some offers of new crop at varying prices. There has been a big lot of extracted honey carried over, enough to carry through the season if no more was produced this season, from from the present outlook. We quote fancy extracted, white, 7@7½c; amber, 6c; Southern, 5½c. Beeswax lower—28c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

SAN FRANCISCO, July 20.—White comb, 1-lb. sections, 12½@13c; amber, 9@11c. Extracted, white, 5½@6c; light amber, 5@5½c; amber, 4@4½c; dark amber, 3¼@3¾c. Beeswax, good to choice, light, 28@30c; dark, 26@27½c.

There are no heavy quantities offering, neither is there much demand. Inquiry is mostly on local account, and is largely for strictly select water-white. The proportion of latter sort is decidedly light in present supplies. Market for amber grades is not displaying any noteworthy firmness.

HONEY AND BEESWAX
When consigning, buying or selling, consult
R. A. BURNETT & CO.,
199 SOUTH WATER ST. CHICAGO. ILL.

Wanted To Sell My Apiary of 90 colonies. Good condition; straight combs; good location. A liberal discount on fixtures and supplies. B. F. HASTINGS, Perry Park Col.
29A2 Please mention the Bee Journa

Prompt Shipments Our Specialty.

If you want your orders filled **within 24 hours**, send them to us. We have the largest stock in Michigan, and can ship at once.
Beeswax wanted at highest market prices.

LEWIS C. & A. G. WOODMAN, Grand Rapids, Mich.

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PERFECT GOODS!
LOW PRICES!

A Customer Once, a Customer Always.
We manufacture

BEE-SUPPLIES
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(Been at it over 20 years.)

It is always BEST to buy of the makers.
New Illustrated Catalog Free.

For nearly 14 years we have published

The ÷ American ÷ Bee-Keeper
(Monthly, 50c a year.)

The best magazine for beginners, edited by one of the most experienced bee-keepers in America. Sample copy free.
Address,

The W. T. FALCONER MFG. COMPANY
JAMESTOWN, N. Y.

W. M. Gerrish, Epping, N. H., carries a full line of our goods at Catalog prices. Order of him and save the freight.

Please mention Bee Journal when writing

I. J. STRINGHAM, 105 Park Place,
NEW YORK

Manufactures and carries in stock every artice a bee-keeper uses. BEES AND QUEENS IN SEASON.
Apiaries—Glen Cove, L.I. Catalog free.

ST. LOUIS, 1904.

Bee-Keepers' Supplies Galore.
Catalog Free.
A No. 1 Smoker by mail, $1.

Bees, Honey and Beeswax bought and sold for cash.

LEAHY MFG. CO.,
1 ALTA SITA, EAST ST. LOUIS, ILL.

Rush Orders

Are pouring in, but we are filling them (almost every single one) within a few hours after they are received. We can ship

Sections, Comb Foundation, and Dovetailed Hives
UPON RECEIPT of ORDER
in regular packages.
Open Day and Night.
Shipping Facilities Unequaled Anywhere.

G.M.Scott & Co. 1004 East Washington St.
INDIANAPOLIS, IND.

Please mention Bee Journal when writing

The Demand for
Moore's Strain of Italians

becomes greater each year. The following report shows the reason why:

EXCEL IN STORING CAPACITY.

B. S. Taylor, a large honey-producer of Perris, Cal., who sent me an order for 75 queens at one time, says:

"I have a large apiary mostly of your stock, and I have never, in my 30 years' experience, seen so quiet and gentle bees to handle, and in storing capacity they excel anything I have ever had."

Untested Queens, 75c each: six, $4.00; dozen, $7.50. Select Untested, $1.00 each; six, $5.00; dozen, $9.00.

Safe arrival and satisfaction guaranteed. Descriptive circular free.

I am now filling orders by return mail, and shall probably be able to do so till the close of the season.

J. P. MOORE,
31Dtf MORGAN, PENDLETON CO., KY.

Please mention Bee Journal when writing

27th Year **Dadant's Foundation** 27th Year

We Guarantee Satisfaction. What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS. PATENT WEED-PROCESS SHEETING.

Why does it sell so well? Because it has always given better satisfaction than any other. Because in 26 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material.
We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies
OF ALL KINDS.

Langstroth on the Honey-Bee—Revised
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

DADANT & SON, Hamilton, Hancock Co., Ill.

Please mention Bee Journal when writing

DON'T RUN THE RISK
Of Having to Wait for
Sections and Shipping-Cases.
Send to Us and
Get the Best, and Get it Quick.

BEWARE
WHERE YOU BUY YOUR
BEEWARE
WATERTOWN, LEWIS U.S.A.
MAKES THE FINEST

G. B. LEWIS CO., Watertown, Wis.,
U. S. A.

WATERTOWN, LEWIS U.S.A.

National Bee-Keepers' Convention, St. Louis—Sept. 27-30

AMERICAN BEE JOURNAL

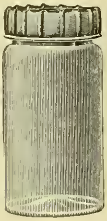
WEEKLY—$1.00 A YEAR.
Published by GEORGE W. YORK & CO., 334 Dearborn Street.

44th Year. CHICAGO, ILL., AUG. 11, 1904. No. 32.

A HOME THE HONEY-BEES HELPED TO BUILD, BELONGING TO MR. J. E. CRANE, OF ADDISON CO., VT.
(See page 548.)

MARKETING YOUR CROP.

If you sell to the retail trade nothing helps sales better than a neat package. If you sell to commission merchants your honey packed well will always bring the best prices. You are a penny wise and a pound foolish if you market your crop in anything but the best packages. It is appearance as well as quality that brings new customers and holds old.

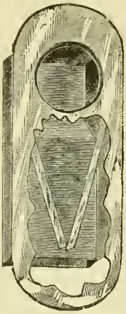


Simplex Jars.

The latest and best. 1-lb. size only. It is going to supersede our No. 25 jar. Prices on application.

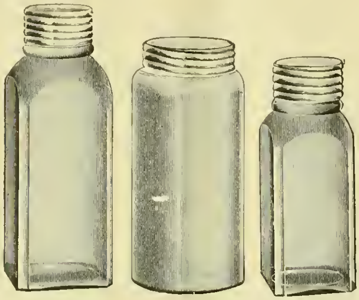
Rubber Stamps.

A fine way to put your name on your section-cases is to use a Rubber Stamp. Full prices and description of our various styles are found in our Rubber Stamp Catalog. Free.



Bee-Escapes.

No comb-honey producer can be without an outfit of these Escapes. They save much hard work. Your honey is taken off in good order and with a minimum of disturbance. See general catalog for prices.



Hershiser Jars.

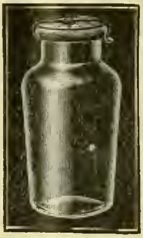
Very neat and attractive. Cork-lined aluminum caps which seal tight. Clear flint-glass. They are made in four sizes square: ¼-lb., ½-lb., 1-lb., and 2-lb. In three sizes round: ½-lb., 1-lb., and 2-lb. For prices, see general catalog. Other prices and styles also shown in this catalog. If you have not a copy, request it of our nearest branch house or agency.

No-Drip Shipping-Cases.

The best package for marketing your comb honey made from selected basswood smoothly cut. In all sizes for different widths and kinds of sections. Prices given in general catalog. Get the best prices for your honey this year.

Screw-Caps.

We can furnish nearly all sizes and styles of screw-caps and honey-gates. See general catalog for prices and descriptions.

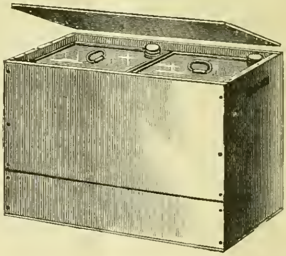


Tip-Top Jars.

Sealed with a rubber ring under the rim of glass top, and held securely by a spring-top fastener. ½-lb. and 1-lb. sizes. See catalog.

Honey-Labels.

We print a complete line of attractive labels to put on all sizes of honey-jars. Sample book and prices on application.



Tin Packages.

Our 5-gallon square tin cans are the favorite for shipping extracted honey. Used exclusively in the West. See our prices before buying. Can be shipped from branch houses.

THE A. I. ROOT COMPANY,

MEDINA, OHIO.

BRANCHES:

Chicago, Ill., 144 East Erie Street.
Philadelphia, Pa., 10 Vine Street.
New York City, N. Y., 44 Vesy Street.
Syracuse, N. Y., 1635 W. Genessee Ave.
Mechanic Falls, Maine.

St. Paul, Minn., 1024 Mississippi Street.
San Antonio, Texas, 438 West Houston Ave.
Washington, D. C., 1100 Maryland Ave.
Havana, Cuba, 17 San Ignacio.
Kingston, Jamaica, 141 Harbour St.

AND MANY AGENTS.

ESTABLISHT IN 1861

AMERICAN BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor. CHICAGO, ILL., AUG. 11, 1904. Vol. XLIV—No. 32.

Editorial Comments

The St. Louis Convention.

Arrangements have been made for the hall in which to hold the St. Louis convention of the National Bee-Keepers' Association. A letter from General Manager France says this about it:

> The annual convention of the National Bee-Keepers' Association will be held Sept. 27, 28, 29 and 30 in the auditorium of the Christian Endeavor Hotel, within 100 feet of the south entrance of the St. Louis Exposition. Vice-Pres. C. P. Dadant has just returned from the Fair, and has secured the best possible accommodations for the members.
>
> Special rates: Send at once 50 cents to General Manager N. E. France, of Platteville, Wis., to secure charter certificates to insure your special rates at the above hotel—$1.00 a day for lodging, or $2.00 a day for board and lodging. Otherwise higher rates will be charged. Make it a point to attend the Fair the week before or after the convention, and thus continue your reduced board-rates. Other hotels near, but higher rates charged. Market Street street-cars, west bound, in front of the Union Depot, will bring you direct to the above hotel without transfer.
>
> N. E. France.

Is it a New Bee-Disease?

Heavy losses in Utah are reported in Gleanings in Bee-Culture, 2000 colonies having succumbed last year in Cache valley. The question is raised whether it is paralysis in an aggravated form or some new disorder. As to the symptoms, B. P. Critchlow says:

> "While there is no trembling, they drop down in the grass in front of the hives, and are unable to fly; and they seem to mount the grass and twigs with great difficulty, and in taking them up in my hands they were unable to fly away, and, if thrown into the air, would drop to the ground. They seemed to have no desire even to sting. It appears to be contagious, for it seems to affect a certain part of a row, while another section of the row seems to be strong and swarming.

Importance of Advertising Honey.

Advertising honey in some kind of a wholesale way seems to be in the air just now, and something may come of it. All may not be agreed as to just what is the best way, but almost any way would be better than no way. Nowadays the business man who does not advertise is likely to be left at the tail-end of the procession; why should there be an exception in the case of bee-keepers?

This will be one of the live subjects at the St. Louis convention.

Thick Combs for Extracting.

E. D. Townsend makes a strong plea in the Bee-Keepers' Review for using only 8 frames in a 10-frame upper story, thus making the spacing about 1¾. He says:

> "With this wide spacing we get great, fat combs of honey, and then we run our uncapping knife *deep*, cutting the comb clear down even with the frame, and there are hardly ever any combs so uneven but what the knife will uncap them the first time over. This makes it possible to uncap much faster, and there are less combs to handle. I do not think it would be putting it too strong to say that two 10-frame upper stories, with 8 combs in, can be uncapped as quickly as *one* with 10 combs in; and then the 8 frames can be extracted in one-fifth less time. Besides this, we get a good deal more wax; and I can not see that it costs anything extra, this drawing out of the combs each year."

"Bees Need No Attention."

The above words appear in an advertisement in an Eastern paper. A copy was sent to us by one of our readers, who desired to know if something could not be done to stop the appearance of an advertisement containing such a statement.

Of course, bees do need attention, and lots of it at proper times. No one can hope to succeed at any thing without giving all needful attention, and just when necessary.

It's a mistake to publish such a misleading advertisement, but we do not see that it can be prevented.

Marketing Unripe Honey.

Mr. R. A. Burnett, of R. A. Burnett & Co., one of Chicago's leading honey-firms, had this to say for publication in "The Packer" for July 16:

> "It is becoming better understood amongst the consuming classes that unripe honey is not palatable; therefore, the chief thing now in selling honey is to get the aroma as well as appearance; especially is this true when Wisconsin, or any of the States east of the Missouri River, seek to put their honey in competition with that west of them. The trade is beginning to discriminate more and more each season with regard to flavor of honey. If a producer is known so to manage the product of the bees as to get this aroma to the utmost, he will stand a better chance of marketing at a little higher price than his neighbor; certainly it will be taken in preference, and where there is an abundance of honey, as there was last year, this is quite an advantage.
>
> "People buy honey for the relish; therefore, the ripening of honey and not exposing it to the atmosphere in such a way as to eliminate this delicate aroma are essential in getting a honey that the market wants. This volatile oil distilled by the blossoms which secrete the nectar is, therefore, the chief factor in selling honey produced in the Middle States. This fact applies equally to extracted and comb honey.
>
> "We are of the opinion that it is more difficult to retain

this aroma in the extracted form than in the comb, perhaps because so many bee-keepers remove the honey from the comb before it has gone through the necessary curing process, and then again exposing it to the atmosphere to remove more of the water, and thus prevent the honey souring.

"It is well to remember that a merit in the article for sale is the chief factor. When the salesman finds that he has something that pleases the people, he becomes enthusiastic and convinces those seeking for a similar commodity to be influenced by his statement, which, if the goods carry out, he has little difficulty in making a second sale to the same party. Honey without the desired flavor has had more to do with its own undoing than any other one thing that it has to contend with. We have had many instances of this in our business by people buying a nice looking case of comb honey for their own use, and, finding it very different from what they had reason to expect, either returned the greater portion of it, or refrained from buying any more, sometimes for years. Let them get pure extracted honey of a tasteless nature and they will not buy any more. It is an easy matter, as a rule, to sell to people what they want, and there are a great many people who desire honey that has that fine, old-fashioned flavor that they used to get, but which now they so seldom find offered in the market."

Mr. Burnett has had a quarter of a century of experience as a honey-dealer, and so is pretty well informed on the side he has worked for so many years—the city consumer's side. Surely, bee-keepers must exercise more care in the direction suggested, else it will be only a question of time when honey will be a drug on the market, no matter how fine its appearance. It *must* have the right flavor—the bee-hive taste.

Miscellaneous Items

Mr. J. T. Calvert, of The A. I. Root Company, was in Chicago recently and gave us a short call. He reports a larger bee-supply business this season than in 1903, and that was a record-breaker.

……

A Flexible Bee-Hat came to this office a short time ago with the following words printed just above the brim in front: "W. S. Pouder, Bee-Keepers' Supplies, Honey & Beeswax, Indianapolis, Ind."

It is one of the best bee-hats we have seen, and it is also somewhat less flexible than others. We have donated it to one of the sister bee-keepers, and she thinks it is all right.

……

Bees Help Build a Beautiful Home.—On the first page will be found a picture of the lovely home of Mr. J. E. Crane, of Addison Co., Vt. In 1900 he wrote as follows concerning it, in the Bee-Keepers' Review:

I had almost forgotten that I had promised to write something about the home the honey-bees had helped to build, and what shall I say? The picture shows the outside of the home better than I can describe it. Of the inside I will only say that it is as convenient and pleasant as it is pleasing from the outside.

It will be observed that the barn has a wing running out to the right. This is my honey-house, where I store my honey and fixtures and do my work. I like this much better than where the honey-house is in a separate building; as I can load my wagon with clamps or hives on the barn floor; yes, and hitch on my horse already to start, before opening the door. Again, I can bring in a load of honey from out-yards, and at once drive in and close the doors, without any interference from robber-bees. Or, if it should be raining, it is a great convenience to be under shelter while unloading. Some years, when I have a large crop, I have found the barn-floor, after sweeping and cleaning, a most excellent place to pack honey; as my work-room would be too clogged to give me room.

But how did the bees help to build the home? I hear some one ask. Well, it was very much this way: When young I was very much of an invalid. The best medical advice was that I should live on a farm; live in the open air. But I could not do the hard, heavy work of the farm, and how was I to make a living without being able to do the work, for I had not the capital to hire it done. Either some branch of farming must be followed that did not require hard work, or some means must be used to make enough to pay for extra help. No one in our parts had made a business of bee-keeping in those days, some 35 or 40 years ago, but some of my neighbors kept bees, and in good years sold some honey. I secured Quinby's and Langstroth's works on bees, and studied the subject very carefully. During the Civil War there were no journals devoted to bee-keeping. One or two that were started just before were discontinued. The bee-keeping world seemed a great blank, compared with to-day. But I was led to believe that if I could not make a living at bee-keeping I could at least sell enough honey to hire the necessary help to run a farm; so I began in a small way, and did not get a pound of surplus the first season, which was a very poor one. The next year was a good one, and my colonies averaged 100 pounds. And then I increased gradually until I had six or seven hundred that I could call my own.

Of course, I used a frame hive from the first, and kept Italian bees. There seemed to be more difference between Italian and black bees in those days than in more recent years. But I find, by getting new strains of Italian blood, that their old-time vigor seems to be restored.

The price of honey was high in those days, averaging me 30 cents per pound above cost of selling.

But if there is one thing above another that I did besides carefully studying the bees and everything connected with them that led to my success, it was that I increased my stock *slowly*, and as I could manage them. If the season was poor I got what surplus honey I could, and let the increase go till a more favorable year, not attempting to increase by artificial means. If the year was good I would get my crop of honey and what increase I could. In this way I made them earn me something almost every year. It seems to me that I have known more failures in bee-keeping to come from rapid increase than from any other cause, and I don't know but more than from all other causes put together.

Another thing I ought perhaps to mention, is that I have stuck to my bees through winter and summer, year after year, and now, after many years, notwithstanding the low price of honey, I have reason to believe that they will pay as well in any fairly good section as any other branch of rural industry; and now, after working with bees for 35 years, I am more than ever interested in them. It doesn't pay to go into bees, and, when there comes a poor year, sell out or let them die, and go crazy over something else. Many sections of our country are undoubtedly unfit for profitable bee-keeping, as much so as are parts unfit for wheat-growing or the raising of fruit, and there is nothing to be gained by trying to make ourselves believe we can succeed with bees everywhere. Such sections can be easily determined by the flora, and the experience of those who have kept bees for some years in such localities.

J. E. CRANE.

……

Printer's Ink—the original publication devoted to the science and art of advertising—gives this very complimentary paragraph in its issue of July 20, for which it has our thanks:

"The American Bee Journal, published weekly in Chicago, the oldest journal of its kind in the United States, was established in 1861. A booklet from the present publisher and editor, George W. York, tells the story of this publication in an interesting way, and compares conditions among bee-keepers of the 60's with those of to-day. The American Bee Journal is representative in its field, and commands the work of the best contributors among scientific and practical bee-men."

"**The Hum of the Bees** in the Apple-Tree Bloom" is the name of the finest bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us *one new* yearly subscription to the American Bee Journal at $1.00.

Some Expert Opinion

"In the multitude of counsellors there is safety."—BIBLE.

Number of Frames for Comb Honey—Surplus-Honey Source.

12.—*(a) How many frames of Langstroth capacity do you use for comb honey?*

(b) If you were starting anew how many would you use?

(c) What is your source for surplus honey?

(d) When does it commence to bloom?

(e) How long does it last?

G. M. DOOLITTLE (N. Y.)—a. 6 to 10. b. 6 to 10. c. Clover, basswood and buckwheat.

N. E. FRANCE (Wis.)—a. Full set of Langstroth frames. c. Clover. d. June 6 or 10. e. 4 weeks.

PROF. A. J. COOK (Calif.)—a. 8. b. 8. c. White sage. d. Varies, usually about June 1. e. 4 to 6 weeks.

MRS. J. M. NULL (Mo.)—a. 8 and 10. b. 10. c. White clover. d. About third week in May. e. About 6 weeks.

R. L. TAYLOR (Mich.)—a. 10 and 5, owing to circumstances. b. The same. c. Clover and basswood. d. About June 1 and July 4, respectively. e. Till about July 20.

EUGENE SECOR (Iowa)—a. 8. b. 8. c. White clover and linden. c. White clover about June 15; linden about July 1. e. White clover, one to two months; linden 10 days.

JAS. A. STONE (Ill.)—a. 10. b. 10. c. Principally white clover. d. Latter part of May. e. 4 to 6 weeks, according as the season is wet or dry. It has been known to last longer.

C. P. DADANT (Ill.)—a and b. We use a deeper frame than the Langstroth. c. Clover and fall blossoms. d. Clover about June 1; fall bloom about Aug. 25. e. About a month.

J. M. HAMBAUGH (Nev.)—a. I run exclusively to extracting. b. 10 frames. c. Principally alfalfa here in Nevada. d. By June 10. e. Until frost—September or October.

DR. J. P. H. BROWN (Ga.)—a. From 8 to 10. b. Same number. c. Fruit-bloom, poplar, holly and persimmon are the principal sources. e. The spring honey-flow is over by the middle of June.

S. T. PETTIT (Ont.)—a. About 10. b. Not sure, but I would test. c. Larger hive. c. Mostly clover, linden and Canada thistle. d. The time of commencing varies a good deal. e. Usually 40 days.

REV. M. MAHIN (Ind.)—a. My standard (I have some odd sizes) holds about the equivalent of 8 Langstroth frames. b. I would not make any change. c. White clover. d. In the latter half of May. e. Two months, more or less, according to the season.

O. O. POPPLETON (Fla.)—a. About 9. b. Same. c, d and e. We have three sources: Wild pennyroyal in January and February; saw palmetto about April 10 to May 20; and black mangrove about June 20 to Aug. 1. These dates vary very much. I have given about the average.

C. DAVENPORT (Minn.)—a. 8. b. 8. c, d and e. White clover and basswood. White clover commences to bloom here about June 1, usually, but seldom yields much until about the middle of the month; it generally yields from 30 to 40 days. Basswood generally blooms about July 1, and lasts from 1 to 2 weeks.

L. STACHELHAUSEN (Tex.)—a. I do not produce section honey any more. b. I would use a capacity of a little less than 8 Langstroth frames, but more and shallower frames. I believe the Danzenbaker hive would suit me in this respect. c, d and e are different each year in this locality.

R. C. AIKIN (Colo.)—a. 8 usually *during* the flow; 10 to 12 at all other times. b. 6 to 8 while flow is on; 12 *at all other times*, accomplished by "divisible brood-chamber" hives after the Heddon idea. c. Alfalfa and sweet clover. d. Alfalfa June 10; clover July 15. e. Alfalfa 2 to 4 weeks; clover about same.

C. H. DIBBERN (Ill.)—a. I do not use the Langstroth hive, but give about the space of 8 such frames. b. I would leave it at that. c. White clover, basswood, sweet clover and heartsease. d. May 20 for white clover, June 15 to 20 for linden and sweet clover, Aug. 15 for heartsease. e. It varies considerably.

E. S. LOVESY (Utah)—a. 10 in Langstroth, and in the shorter and deeper hive. b. 10. c. Lucerne, sweet clover, white clover, Rocky Mountain bee-plant, and fruit-bloom. d. Lucerne in May; sweet clover in June; Rocky Mountain bee-plant in July; white clover and fruit-bloom in April. e. Lucerne, sweet clover, and Rocky Mountain bee-plant usually last until the end of September.

E. D. TOWNSEND (Mich.)—a. I use the Heddon sectional hive for comb honey, each section being of 5 Langstroth frame capacity. The old colonies are worked on one or two sections, according to their strength; new swarms are hived in one section. b. Same as above. c. Clover, raspberry, and asters, here in Mecosta county. d. Clover and raspberry early in June; asters the middle of August. e. From 0 to 4 weeks.

G. W. DEMAREE (Ky.)—a. 9 or 10, in the regular size 10-frame Langstroth brood-chamber. b. If I were starting anew I would make no change. c. Our early summer harvest depends upon the black locust, or other blooming trees, aud (mainly) white clover. d and e. Usually our summer honey-flow begins about the middle of May, and ends the middle of July, depending no little upon the season. Our fall flow from white aster is usually covered by the months of September and October. Every bee-keeper should study his own locality, if he would succeed in the production of honey.

JAMES A. GREEN (Colo.)—a. My hive, consisting of two sections each 6 inches deep, 8 frames in width, Langstroth length, has just about the same capacity as a 10-frame Langstroth hive. b. This size suits me all right, though for other reasons I would, if starting anew, make each section about half an inch shallower. c. Principal sources are alfalfa and sweet clover. Alfalfa began to bloom this season May 20, and yielded first honey to amount to anything June 6. Sweet clover began to bloom June 15. Sweet clover blossoms until frost; alfalfa in three periods, the first of which closes about June 20.

ADRIAN GETAZ (Tenn.)—a. 12 or 13. I have now but few hives taking the Langstroth frames, and I will discard them gradually. I would prefer only 9 frames, but I want them 11 or 12 inches deep, so as to give a brood-nest equal to 12 Langstroth frames, or a little over. With 12 frames, the supers are too heavy to handle when full. They are also larger than the bees can keep warm enough early in the spring, and for that reason they often fail to go up in the large super while they do in the smaller one. Deep frames are also decidedly better for outdoor wintering. In visiting the hives it takes less time to examine 9 frames than 12, even if they are deeper. A 12 Langstroth-frame brood-nest is big enough, but too flat. Frequently the queen occupies the center combs and the sections above, and neglects the outside combs. c. Tulip-tree, honey-dew, persimmon, and sourwood, in the order named, with the chances that one or several miss every year. d. The tulip-tree about May 10. e. Till July 20. But there are intervals without a flow between these four sources, besides the chances of some missing.

Dr. C. C. Miller (Ill.)—a. 8. b. I'd do some studying whether to have 8 or 10, inclining to 8 if feeling vigorous enough for the extra work, and to 10 if feeling a little lazy. c. Chiefly white clover, with some fall flow. d. About June 1 comes first bloom with flow 10 days later. e. The *flow* lasts from two to three weeks to as many months. Sometimes blossoms are plentiful with no nectar.

P. H. Elwood (N. Y.)—a. We use about 2200 square inches of comb surface with Italians; 2500 would be better with Carniolans and some of the other races. We change the capacity to meet the capacity of the queen. b. The same. c. White clover with alsike; basswood and buckwheat. d. White and alsike clover about the middle of June; basswood about July 10; buckwheat about Aug. 1. e. Occasionally the bloom is continuous through the season, but I never knew the yield of honey to be continuous. If we get three to four weeks of good honey weather we are fortunate; sometimes much less.

E. Whitcomb (Nebr.)—a. 8. b. 8. c. Sweet clover, white clover, and heartsease. d. April 30 for sweet clover; white clover follows, and heartsease about Aug. 1, and continues till frost. e. Sweet clover of the yellow variety lasts till July 1, when the white comes into bloom and lasts till after the first frosts. White clover begins blooming about June 1, and, under favorable conditions, lasts well toward fall. Usually, however, dry weather catches it during August. Heartsease begins blooming about Aug. 1, and lasts till frosts. The most productive in nectar is that variety which comes up in the stubble-fields after the harvest is cut. We have two varieties, the upland and swamp heartsease.

Contributed Articles

Rearing Thousands of Queens from One Colony.

BY G. M. DOOLITTLE.

A CORRESPONDENT wishes me to tell the readers of the American Bee Journal how I rear queens. To go into all the minutia of the matter would take up all the room in several issues of the American Bee Journal, and were I disposed to do this the Editor would not allow it. Therefore, I have referred the correspondent to the pages of "Scientific Queen-Rearing," which explains the whole thing; and I will in this tell, briefly, how to work a colony, as is given in full in the book, so that thousands of queens can be reared from the same, this colony having a laying queen in it all the time.

When spring opens I select one of the strongest colonies I have in the apiary, the same having a queen of the previous season's rearing, as this colony should have a queen that is not likely to fail in her egg-laying ability during the season, as the *laying* of the queen below has much to do with the perfection of the queens reared above, in my opinion.

About the middle of May I go to other colonies in the apiary, and take frames of emerging brood to the number needed to take the place of those in this hive, having no brood in them, which is generally from one to three. These beeless combs of brood are now set in the hive, when in a week or ten days I have a colony strong enough to commence operations.

As soon as the colony is strong enough to go into the upper story profitably, I go to some hive in the bee-yard that can spare them, and get two frames having mostly eggs and unsealed larvæ in the comb. Or, if the colony is a little weak, take these two frames of unsealed brood from their hive and set in their places two frames of emerging brood from other colonies. This will strengthen the colony still further, and make it stronger earlier in the season. I now put on top of this hive containing the prepared strong colony, a hive having a queen-excluder nailed to the bottom of it, so that if we need to look into the hive below afterward, the excluder will lift off with the upper hive. Having the upper hive and excluder in place, the two combs of unsealed brood are placed in the center, and four frames well filled with honey are placed two on either side of these, making six frames in all. The rest of the hive is filled out with dummies, except the place left for the division-board feeder used in feeding, at all times when the flowers are not yielding nectar.

E. R. Root and others partition off the hive having the strong colony, with excluders, instead of using an upper story; but from a trial of the matter for several years, I obtain the best results with the upper story. However, the principle of the partitioned off part is the same as the upper story, and fully as good queens can be reared; but with me not so many of the prepared cell-cups are accepted as in the upper story.

When about two days have elapsed for the new colony to adjust itself to the new conditions, it is ready for a batch of prepared cell-cups, as given in the book. To tell all about how to prepare these would be altogether too long for this article, and I must refer the reader for this part to the book. And lest this is thought to be for an advertisement, I wish to say that the publishers of the American Bee Journal have full control of the book, sale and all, and I have nothing to do with it.* I write this article only by request of the correspondent.

To return: Before going for the needed royal jelly and the larvæ to transfer into it, I stop at the prepared hive, take out one of the dummies, shove the frames that way till I leave a frame's space between the combs of brood, when the cover is put on again. As a rule, it takes me from 15 to 20 minutes to get the royal jelly, the larvæ, put the jelly and larvæ into the cell-cups, and take the now prepared frame to the prepared hive.

On now opening the hive I find the prepared space left for the frame of prepared cell-cups filled with bees, all clustered in there, often so closely that I have to work the frame slowly up and down in lowering it into the hive, thus causing the bees to run out of the way. I speak of this, not only to show how strong the colony should be to rear good queens, but I believe that this clustering has quite a little to do with their being better prepared with royal jelly, and for queen-rearing, than they would be did I leave the providing of this space till I came with the cell-cups already prepared for insertion.

Three days later I go to the hive again, take out another dummy, draw the frames toward that part of the hive from which it is taken till I come to the frame of brood, when I lift the frame of cells, take off one or two of them for the royal jelly needed in starting the next batch of cells, when the frame of cells is placed in the vacant space behind the frame of brood, caused by taking out the dummy and drawing the others along, thus preparing the same place between the frame of brood for the next frame of prepared cell-cups which the first one occupied, and when all ready it is placed there as was the first.

Four days later the last dummy is removed, the frames again drawn along till we come to a frame of brood, when the last prepared frame of cells is taken out, one or two taken off for royal jelly, and the frame "jumped" to the outside of the frame of brood, which gives room for the third prepared frame between the frames of brood again, where it is placed as soon as it is prepared. As it is intended not to do any work with the bees on Sunday, I time it so that no cells need come off on that day, from being "ripe," so prepare the next lot of cells three days later, which makes ten days from the time we started, at which time the first are ripe, so that we really have only three prepared frames every ten days.

The frame of ripe cells is now taken out and distributed where they are needed, when I lift out the two frames of brood, look them over to make sure that the bees have started no queen-cells on them, when these two frames of now sealed brood are jumped over behind the two frames of cells now remaining. I then take out a frame of honey from each side, and shove all the frames along toward each side of the hive, so as to make room for two frames containing eggs and larvæ, taken from any hive in the yard, which are placed in the center of the hive again as the first two were, being left apart for the fourth prepared frame, which is now fixed as were the others, and put in.

This tells the correspondent all there is of it, only that you keep on in this way all of the season. If a honey-flow comes on, or the bees get too crowded for room so they are liable to swarm, put on a hive of combs above this second story, and extract the honey from it as often as it accumulates, making the hive too heavy to lift off handily; for you must lift this hive instead of the cover, after it is once put on.

In this way I get hundreds, and up into the thousands, of cells from the one colony in one season.

Onondaga Co., N. Y.

[Every bee-keeper, whether a queen-rearer or not, should have a copy of Mr. Doolittle's "Scientific Queen-Rearing." We furnish it by mail at $1.00 for the cloth-bound book, or $1.75 for the book and the American Bee Journal one year; or the leatherette-bound book for 75 cents, or with the American Bee Journal one year—both for $1.50.—EDITOR.]

Protect the King-Birds—Planting Trees.

BY "CLOVER BLOSSOM."

I WANT to shake hands with J. P. Blunk. I have just been reading what he said about the king-bird on page 829 (1903). It makes me feel very happy to find a brother who takes such a good, square view of the matter. I am a lover of the busy bee as well as of our beautiful birds. It has often pained me to see how people are short-sighted enough to slaughter the king-birds just because something has happened to a virgin queen, and she has "turned up missing."

I can recall but one instance where it was claimed that a king-bird was killed while in the act of catching a queen. Now, where chickens are permitted to range in the apiary they have been known to pick up drones, and even worker-bees. The editor admits in a recent issue of Gleanings in Bee-Culture, that it is entirely possible for the same chickens to pick up a mated queen as she returns from her wedding-trip. Now, why don't our more hasty bee-keepers kill every chicken on the place in order that they may insure the safe return of all the queens? There would be just as much philosophy in this act as there is in swearing eternal vengeance on a harmless bird, which, instead, is actually our friend.

Let me digress a little and prove my statement by good authority:

> "Bee-keepers accuse the king-bird of a taste for honey-bees, but an examination made by Prof. E. E. L. Beal, of 281 stomachs, shows that the charge is unfounded. Only 14 stomachs contained remains of bees, most of which were drones, while 60 percent of the king-birds' food was found to consist of injurious insects."—Chapman's Bird Life.
>
> "One bee-keeper of Iowa suspected the king-birds of feeding upon his bees, so shot a number near his hives, but when the birds' stomachs were examined by an expert entomologist, not a trace of a honey-bee could be found."—Farmers' Bulletin, No. 54.

The king-bird, besides destroying hosts of noxious insects, renders us another service which is far more valuable, namely, protecting us against crows and hawks. They have been the means of saving many a little chicken, turkey, duck and bird from the ravages of the crows and hawks. Plenty of data is on record to prove this statement. I have seen them frequently attack a crow or hawk with such fury that he has been glad enough to escape his tormentors without his intended victim. I do not think I am valuing their good work too highly when I say that I believe a pair of these birds are worth $25 a year to any community. I would like to become acquainted with the sister who thinks she is spry enough to have a gun always in her hand when the hawks come around.

I trust that before any bee-keeper will again look over a gun-barrel at a king-bird, he will drop a postal card to the Secretary of Agriculture, Washington, D. C., for Farmers' Bulletin, No. 54, entitled, "Some Common Birds and Their Relation to Agriculture." The bulletin will be sent free to all applicants. By the perusal of this bulletin one can learn more facts concerning our common birds than perhaps he would gather in an ordinary lifetime.

Be very careful not to mistake your friends for your enemies.

PLANTING TREES, OR REFORESTING.

The scarcity of lumber seems to be quite an alarming question at present. Prof. A. J. Cook has been doing much to stir up the people to plant trees. He has recommended an excellent list of trees for the warmer parts of the United States.

Why should we not, as a bee-keepers' fraternity, put our shoulders to the wheel and help solve this great problem? There is a great army of us, and if we will all fall to and celebrate Arbor Day once or twice a year, by each planting a few trees, such as linden, locust, tulip-poplar, eucalyptus, or some other trees that will not only make a beautiful shade, but also yield nectar and grow into valuable timber, we can accomplish a great deal.

Last spring I brought a number of linden trees from along the Delaware River, and planted them on red shale near my home; they all grew but two, and one of those the chickens resurrected the day after it was planted. I also got three tulip-poplars started in spite of our long spring drouth.

This locality differs somewhat from Dr. Miller's, as I can secure all of the young linden that I can use from beneath old trees along the river where there is a rich, moist, sandy loam.

The locust trees are somewhat more difficult to secure, so I have started a miniature nursery in a corner of the garden.

True, we perhaps would never cut a figure on the lumber market, but we at least would be beautifying our homes, extending the nectar-resources, and, by extending forestry, we would be able to help protect our land against drouths and floods.

Bucks Co., Pa.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

QUEENS MATING MORE THAN ONCE.

As to queens mating more than once, two very different cases are mooted. One is a second fertilization some months or years after the first, to renew a waning fecundity. I think the evidence is pretty scanty of this ever having really occurred. The other is a second meeting quite closely subsequent to a first one—the reason of this second meeting being that the first was insufficient. If the first bucket does not fill the reservoir take another one; have the sperm-reservoir filled somehow. This kind of repeating is so reasonable, and the evidence of its occurring occasionally is so positive, and so high in character, that I guess we would better accept it—provisionally. That a queen very often *goes out* more than once is, I believe, well accepted. But some have inclined to the opinion that three or four trips, and two or more meetings, was the normal and usual style. Hardly to be accepted at present, although, as Dr. Bohrer says, it may be more frequent than generally known. Pages 373 and 374.

PERFECT CELLAR-WINTERING OF BEES.

That there is often a slight murmur of sound to be heard in the bee-cellar when bees are wintering fairly well seems to be pretty well established—backed by Mr. Doolittle for one—but how about the very *best* of wintering? S. T. Pettit claims that there is a still better sort of wintering, during which perfect silence is the rule—that is, so nearly a perfect silence that the human ear does not readily catch any sound. I guess he is right—and that perfect health of the bees, perfect quality of the honey, sound pollen, pure air, and complete abstinence from all brood-rearing are the elements. Mr. Pettit also thinks that the temperament of the bees determines whether they winter silently in No. 1 style or winter in No. 2 style with more or less of stir and noise. Perhaps he is right in this also. Yes, the larger half of the fraternity do not properly estimate how much better perfect wintering is than the tolerable kind which is almost universal, except when the poor kind prevails. The astonishing yields of early surplus reported from Notre Dame College apiary argue in the same direction—large hive, extra-strong colony in the fall, perfect wintering. Page 453.

WIDTH OF SEPARATORS—HEAVY WEIGHT SECTION.

A. C. F. Bartz is right in esteeming it very foolish to have separators so narrow that the honey will be bulged at the top and bottom. I'm not so sure that he is right in having no passage at all at the top.

And what shall we do with the 17-ounce section? Mr. B. sells it for a pound. Good way—for the man whose mind feels easy about it, but perhaps too much to ask of the average bee-man. We've been working and lifting hard to get him up to the 16-ounce level; and if we ask him to go higher I fear he'll "go all to pieces." Home use and presents take some honey, and the 17-ounce section is good for these purposes. Page 454.

BLACK BROOD.

Bee-Inspector West tells us a thing about black brood which I have been waiting to hear. "Black brood is more radical in a new territory than after it has been there a year or two." Most of the violent infectious diseases, both of our fellow creatures and ourselves, show the same peculiarity. The first reports we had of black brood seemed to indicate that it would quickly sweep the United States and leave us no bees. It has not done so; and it was reasonable to infer at the time that it would not. Mr. West very reasonably suggests that a colony in which the bees are mostly old, and in which they have become dumpish and apparently sick, can not be cured. Destroy them at once. Page 454.

BEE-CENSUS OF THE WORLD.

As to the figures on page 460, representing the bee-census of the different nations, they *look* a little as if they were manufactured. Too round. Switzerland is quite a country, and somewhat famous for its bee-culture; how about so few as 30,000 for Switzerland?

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Management of Swarming—Sheet Bee-Escape—Transferring—Drones and Burr-Combs—Superseding a Queen and Swarming.

Dear Sister Bee-Keepers:—I will give some of my experience in bee-keeping. I began in the spring of 1902. We bought 6 or 7 colonies in home-made hives, with frames running crosswise instead of lengthwise. I did not know one bee from another, and thought all there was to do was to get the honey when it was stored.

But coming across an article on the care of bees in the spring, I found there was something to do, so I looked through the hives. One colony had already died, and most of the others were on the verge of starvation. I fed them as directed, and had no further trouble. I then subscribed for the American Bee Journal, and I could not now do without it. I think a bee-paper is indispensable to *successful* bee-keeping, also the "A B C of Bee Culture."

Some of the old bee-keepers in this locality, who have kept bees for 30 years, are surprised that I keep my bees from swarming. I have not had a natural swarm this year, but have had 17 artificial swarms. I go through the hives every week, dividing if I want increase, and cutting out queen-cells and changing frames about if I do not. Last year I did not follow this method, and the bees swarmed a plenty. I caught several swarms by taking a frame of brood, tying a string to each end of the frame, and hanging it on a nail driven in the end of the pole of the swarm-catcher. The queen would very soon crawl onto the frame of brood, and the bees would follow. Some swarms settled in the low, thick hedge where I could not get at them, so I just slipped the brood in front of them, and in a little while I had the queen, then I put the frame in the hive on the ground, and the bees followed.

When I take off supers I stand them on end on the ground, then spread a white sheet over them, tucking it in around the bottom so that no bees can get in from outside. In a few minutes I go around to the different groups and turn the sheet over. That throws the bees outside, and in a half an hour, or an hour, I have all the bees out. They crawl up on the sheet. This year I cut a hole in the sheet and sewed a screen-wire cone in, and the bees just hustle out through the cone.

I also use a white sheet to cover the hive where there is robbing going on, and it has never failed to stop it for me. I close the entrance to one bee-space, and the home bees will kill the robber-bees and pitch them out of the hive.

When the weather was cool and cloudy I fed my bees in little troughs that kept them busy when there was no nectar in the flowers. We have had so much rain that it has not been a very good season for the bees. The supers are not much nearer full than they were a month ago, but the hives are crowded with bees. After the rains, when the sun comes out clear and bright, the bees rush to the fields, which are a mass of white clover, that has been in bloom since May 11. The fields look almost like fields of snow. In the fall we have the Spanish-needle, and the whole country looks like a field of gold. It is such rich honey—not strong like the buckwheat.

I have been transferring my bees from the home-made hives to the dovetail hives this spring. I set a hive with a frame of brood and full sheets of foundation—or, better, a hive full of drawn-out comb—under the box-hive, and the queen soon takes possession of it. I smoke the bees down from the top of the box-hive, so that they will all go into the lower hive. I then set the box-hive on another hive prepared as before, except that I put a queen-cell in a cell-protector in the new hive, and as the brood hatch out they go down. Enough bees will go to the box-hive to keep the brood warm. I set the new arrangement by the side of the hive containing the queen, so that the bees adjust themselves in a day or so, and the new hive (with its box-hive) can then be removed to a new place. The bees will stay with the brood, and by the time the queen is hatched the brood is about all hatched, too. The box-hive can then be done away with.

The first swarm I ever caught clustered in an apple-tree on a large limb, near the trunk of the tree. I put a frame of brood in a hive, put the cover on and set the hive on a limb above the swarm. They all went in, and the worker-bees went off to the field and came back in the evening. I then set the hive on the bottom-board on the ground under the tree, and after dark I brought it back to the bee-yard.

I saw an interesting sight last summer. One day I took an extracting super off the hive and found a good deal of burr-comb on the underside. The worker-bees and drones were thick over the broken cells. They mended it all nicely before they left. The drones would spread their legs around the cells and pull them into shape, pressing with their heads and hind part of the abdomen. They worked as hard as the worker-bees, but in a different way. It looked very funny to see them pulling and patting the cells into shape. If the drones do not gather honey why do they go so busily back and forth to the field with the worker-bees?

How can one tell when a colony wants to supersede a queen? and when the bees want to swarm?

(MISS) B. LOUISA HACKWORTH.

Bates Co., Mo., July 21.

You are to be congratulated on freedom from swarming, but you must remember that the season may have something to do with it. Last year was one of the worst seasons we ever had for swarming, and this year there is very little inclination that way.

Seeing that you have done so well using the cone in the sheet getting bees out of supers, you might do still better to go a step farther and use the Miller tent-escape.

Your plan of transferring is evidently original, and it is bright. Your smoking down the bees out of the box-hive into the new hive is practically the regular driving, only you do it the reverse of the usual way, which is to turn the box-hive upside down and smoke and drum the bees *up* into the new hive. When bees are thus stampeded they naturally go up rather than down.

In some cases there might be danger that after the driving there would be so few bees left in the box-hive that not enough would go down to care properly for the frame of brood with its queen-cell.

Those drones evidently had a plot made up to deceive you, pretending they were hard at work when they were not doing a thing. Please watch closely again, and see if any particle of the wax is actually moved when they appear to be working it with their legs.

When queen-cells are started you can not always tell whether the bees mean to swarm, or merely supersede their queen; but you can judge something by the number of cells. For swarming there will be a goodly number; for superseding, a very few, perhaps only one.

You will make a good bee-keeper. You have a good deal of originality, and seem to do quite a bit of thinking on your own account, and even if you do make mistakes you will come out ahead in the end.

We shall be glad to hear from you again.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Wiring Frames with Starters—Hiving Swarms—Keeping Ants Out of Hives.

1. Is it necessary to wire frames that have an inch foundation starter?

2. I brought a swarm home from the woods and hived them, putting a frame of brood from another colony in with them. Was that right?

3. What will keep ants out of the hive? VERMONT.

ANSWERS.—1. Not at all.

2. Yes, a frame of brood is a good start toward housekeeping, and often makes them more contented.

3. The surest thing is to have the hive-stand with legs, each one standing in an old can or something of the kind kept filled with water or oil. In some parts of the South ants will utterly destroy a colony of bees; but I think the ants that you have can be kept at bay by the bees themselves without any help from you. They make their nests about hives mainly for the warmth and only where bees can not get at them, and do no real hurt.

Selling Honey to Boarding-Houses.

Why do they not use honey in boarding-houses? In the locality where I market my honey I cannot sell to them. A few weeks ago, by hard begging, I did get one lady who kept a boarding-house, to buy 30 cents worth of honey. I coaxed her to get it so that I might be able to say that I had sold honey to one boarding-house. When I call at a boarding-house to sell honey about the first I hear is, "It's no use. We don't want any honey. We don't like it, and the boarders will not eat it." Probably they will refer to one "star" boarder who likes it. One of the cities in which I sell my honey has a population of 25,000 or 30,000, and it is full of boarding-houses, but I cannot sell honey to any of them. I do not understand it. I have thought of making a canvass of the city, asking the proprietors of the boarding-houses why they do not use honey. Do you think they would tell me? I have come to a decision in my own mind in regard to it, but I would rather hear from more experienced bee-keepers like yourself on the subject before I give my opinion of it. Please explain this.

ARKANSAS.

ANSWER.—I can only make a guess in the case, and that is that they don't want the expense. If the boarders eat just as much butter with honey as without it then the honey is an extra expense. Another thing: When honey is not put regularly on the table, but put on just as a rarity, very likely a section melts away so rapidly that the boarding house landlord thinks he never could stand it. If it were on the table at every meal, they would hardly eat so much at a time. If any one can give other light upon the subject, the place is open for it.

Queen Mating After an After-Swarm—Tiering Up Supers.

1. How many days is it from the time an after-swarm is hived until the queen goes out to mate?

2. I notice by the bee-papers that a good many tier up supers 4 and 5 high. Do you not think that makes it too far for the bees to carry the honey? How many would you advise placing on at one time? NEBRASKA.

ANSWERS.—1. Henry Alley, the veteran queen-breeder, says a queen never goes out to mate till 5 days old or older. According to that, if she should go out with a swarm when a day old, she might be expected to mate 4 or 5 days after swarming. If held in the hive more than a day before swarming, the time might be shorter.

2. It depends upon the season and the colony. In a poor season, one super may be enough, perhaps too much, for the strongest colony. In a flush season a weak colony may not need more than one super, and a strong colony may need 5 or even more. No matter how far the bees may have to carry the honey in the hive, they should not be crowded for room to work in. For most colonies in a good season, 3 or 4 supers at a time may be enough. Give enough so the bees will not be crowded for room, whatever that number of supers may be.

Making a Place for a Queen—Yellow Matter at Hive-Entrance.

1. I had a colony that I supposed was queenless, so I sent for a queen. On her arrival I made another search and found a queen in that colony. What would you do under such circumstances? I took a frame of brood from each of two colonies, putting the queen with them. Then I put about a quart of bees from another colony in with these, and shut the hive up for 24 hours. They were all right until this evening when the others began to rob them, and I moved the hive.

2. I find small drops in the entrance of the hive that look like yellow matter. What is it? IOWA.

ANSWERS.—1. Your plan of making a place for the queen was all right. Perhaps a smaller entrance would have helped to keep the robber-bees out. Moving the hive to a new place might happen to work all right, but generally it would do more harm than good. It would lose to the colony the field-bees, making it less strong to resist robbers.

2. I don't know. If it was at the entrance of the hive in which the bees were fastened, it might be the discharges of the bees, for sometimes they discharge their feces at the entrance of the hive upon being freed. If it was at the other hives I don't know what it might be unless pellets of pollen wet with rain or dew.

Introducing New Blood.

I am an amateur in bee-keeping, am a subscriber to the most excellent American Bee Journal, and like it very much. I started with one colony this spring, having lost two large ones last winter, and have had two swarms, so that now I have 3 colonies in good condition. I desire to ask a few questions:

1. The bee-keeper from whom I purchased has bred them for 8 or 9 years, and never during that time introduced any new blood. Do you not think it advisable to introduce new queens in all three of my colonies? Would it not improve them? They surely do not store what they ought to. They are Italians.

2. What time of year would you advise introducing the queens, if at all? PENNSYLVANIA.

ANSWERS.—1. If there are no other bees near you, the likelihood is that your bees have suffered from close breeding. But a queen and drone may meet when their respective colonies are two miles or more apart. So if there are bees around you at no greater distance than that, there is less danger. It would be a good plan in any case to get a new queen for one of the colonies—hardly for each—and if the new stock shows superior qualities you can easily breed from that.

2. There is probably no better time than August.

BINGHAM
CLEAN
BEE SMOKER

Pat'd 1878, '82, '92 & 1903

Why Not Get the New Clean Smoker...

Costs no more. Goes without puffing. Will last longer, and is more convenient. The sum of all improvements in bee-smokers. Send card for circular to

T. F. BINGHAM
Farwell, Mich.

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The Chas. Schild Co.—We are informed that Mr. Chas. Schild who has heretofore done business at Ionia, Mich., has moved from Ionia to 401-403 Prospect St., Cleveland, Ohio. With this removal Mr. Schild has organized The Chas. Schild Co., and has associated with him in this business his brother-in-law. By this removal the firm has increased facilities for doing a larger business in their popular and successful poultry lice killing machine.

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FROM MANY FIELDS

We Thank Thee.

For flowers that bloom about our feet;
For tender grass so fresh and sweet;
For song of bird and hum of bee;
For all things fair we hear and see,
Father in heaven, we thank thee!

For blue of stream and blue of sky;
For pleasant shade of branches high;
For fragrant air and cooling breeze;
For beauty of the blooming trees,
Father in heaven, we thank thee!

—Emerson.

A Very Dry Summer.

I had 6 colonies, spring count, and will get from 200 to 300 sections of comb honey from them, mostly from basswood. I increased to 10 colonies. In this immediate vicinity we have had a

Special Notice.

I have all the orders for Queens that I can fill until Aug. 25. E. A. SIMMONS,
32A1t FORT DEPOSIT, ALA.

500 Colonies of Bees for sale, or exchange, for good securities. Abundant alfalfa range; no failures. Reason for selling, ill-health. Address,
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It is bright and up-to-date. Tells all about Southern Home Life. It is full of fine engravings of grand scenery, buildings and famous people. Send at once. 10c a year, postpaid, anywhere in the U.S., Canada and Mexico. Six years, 50c. Or, clubs of 6 names, 50c; 12 for $1. Send us a club. Money back if not delighted. Stamps taken. Cut this out. Send to-day. THE DIXIE HOME,
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QUEEN=BEE FREE

To Our Regular Paid=in=Advance Subscribers.

We have arranged with several of the best queen-breeders to supply us with **The Very Best Untested Italian Queens** that they can possibly rear—well worth $1.00 each. We want every one of our present regular subscribers to have at least one of these Queens. And we propose to make it easy for you to get one or more of them.

In the first place, you must be a regular subscriber to the American Bee Journal, and your own subscription **must be paid in advance.** If it is not already paid up, you can send in the necessary amount to make it so when you order one of these fine Queens.

A Queen Free for Sending One New Subscriber

Send us $1.00 and the name and address of one **NEW** reader for the American Bee Journal, and we will mail you one of the Queens free as a premium.

Now, go out among your bee-keeping neighbors and friends and invite them to subscribe for the old American Bee Journal. If you want some to show as samples, we will mail you, for the asking, as many copies of the American Bee Journal as you can use.

Should there be no other bee-keepers near you, and you desire one of these fine Queens any way, send us $1.50 and we will credit your subscription for one year and also mail you a Queen. Of course, it is understood that the amount sent will pay your subscription at least one year in advance of the present time. So, if your subscription is in arrears, be sure to send enough more than the $1.50 to pay all that is past due.

As the supply of these splendid Queens is limited, we prefer to use all of them as premiums for getting new subscribers. But if any one wishes to purchase them aside from the Bee Journal subscription, the prices are as follows: One Queen, 75c.; 3 Queens, $2.10; 6 Queens for $4.00.

We expect to be able to fill orders by return mail, or almost as promptly as that, so there will be no great delay at any rate

Now for the new subscribers that you will send us--and then the Queens that we will send you!

We have often wondered **WHY** the old American Bee Journal does not **LEAD** in the number of regular subscribers instead of being second? It is **first** in age, and if we may believe many unsolicited testimonials, it stands first in value and helpfulness to its readers. Now, why not make it take the **first place** in the **number** of its regular readers? That's the question.

The next question is, How can it be done? Well, just like the bees of a colony store its surplus honey. One or two bees do not gather it all. Each working bee does a part. Thus, "many hands make light work"—and the job is soon done.

Now, suppose each present regular reader should say to himself, or to herself; "I'll get **one** new subscriber for the American Bee Journal in the month of July, and another one in August." One a month should not be a difficult matter. It may be that many can do better than that. Many have done so already. But suppose there should be gotten during July and August two new subscribers by each one who now reads the American Bee Journal, wouldn't that be a great thing? We believe it can be done.

You know the American Bee Journal, and can best tell to your bee-keeping friends and neighbors its real worth to any one who will read it carefully, and practice its teachings. We will send you all the free sample copies you can use wisely.

We offer valuable premiums for the work of getting **new** subscribers at **$1.00 each.** In addition to the Queens mentioned on this page, here are a few more premium offers:

More Premium Offers.

For 2 New Subscribers—Dr. Miller's Book—"Forty Years Among the Bees" (book alone, $1.00.)

For 2 New Subscribers—Doolittle's cloth-bound "Scientific Queen-Rearing" book (book alone, $1.00.)

For 1 New Subscriber and 25c, Doolittle's leatherette-bound book (book alone, 75c.)

For 3 New Subscribers—Prof. Cook's book—"The Bee-Keeper's Guide" (book alone, $1.20.)

For 3 New Subscribers—Dadant's Langstroth's book (book alone, $1.20.)

For 3 New Subscribers—the book, "A B C of Bee-Culture" (book alone, $1.20.)

For 1 New Subscriber and 10c—Hutchinson's "Advanced Bee-Culture" (book alone, 50c.)

For 3 New Subscribers—Novelty Pocket Knife with your name and address on one side of handle, and Queen, Drone and Worker-Bee on other side (knife alone, $1.25.)

◆

Our Rules on Getting New Subscribers

1. The sender of a new subscriber must have his or her own subscription **paid in advance** at least to the end of this year (1904.)

2. Sending your own name with the $1.00 for the Bee Journal will not entitle **you** to any premium. The sender must be already a paid-in-advance subscriber as above, and the new subscriber must be a **NEW** subscriber; which means, further, that the new subscriber has never had the Bee Journal regularly, or at least not for a whole year previous to his name being sent in as a new one; and, also, the new subscriber must not be a member of the same family where the Bee Journal is already being taken.

☞ **3-frame Nuclei of Italian Bees** (with queen) **$3.00 each; Tested Italian Queens, $1.25 each; Select Breeding Queens, $2.00 each.**

Now, we hope that all who can possibly do so will see what they can do in the line of getting **NEW** subscribers for the American Bee Journal. You will likely surprise yourself at the way you will be able to get them. And it will also pay you well, as you will get the valuable premiums we offer to you. We would like to receive **at least two new yearly subscribers from each reader during July and August.** We will be glad to be kept busy at our desk during the hot weather. We never felt better than we do now, so can stand a grand rush of new subscribers. Just let them come!

Now, for a big pull, and a pull all together! How many will be first to send in new subscriptions?

Address all orders to, Yours fraternally,

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Money in Bees for you.
Catalog price on

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Catalog for the asking.

F. H. FARMER,
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Up First Flight.

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VIRGINIA QUEENS.

Italian Queens secured by a cross and years of careful selection from Red Clover Queens and Superior Stock obtained of W. Z. Hutchinson. I can furnish large, vigorous Untested Queens at 75 cents; after June 15, 60c. Tested Queens, $1.00; after June 15, 75c. Write for discount on large orders.

CHAS. KOEPPEN,
22Atf FREDERICKSBURG, VA.

If you want the Bee-Book

That covers the whole Apicultural Field more completely than any other published,
Send $1.20 to

Prof. A. J. Cook, Claremont, Cal.,
—FOR HIS—
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Liberal Discounts to the Trade.

Take Notice That the New Century Queen-Rearing Co. will have 1000 Queens ready for the mail by April 20. Tested, $1.00; Untested, 75c; 5 for $3.25; 10 for $6.00. Prices on larger quantities and Nuclei given on application. "Prompt service; fair treatment" is our motto.
Address,

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Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Beeswax Wanted for Cash.

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National Encampment, G. A. R.

The Nickel Plate Road will sell tickets, August 12th, 13th and 14th, at $17.75 for the round-trip from Chicago, via direct lines, with stop-over at Niagara Falls and Chautauqua Lake, if desired, within final limit. Also, if preferred, rate of $20.70 between same points for the round-trip via New York City and Boat, with liberal stop-over returning at that point. Tickets good on any train on above dates and also on special train from Chicago at 8 a.m., August 13th. Final return limit September 30th. Meals served in Nickel Plate dining-cars, on American Club Meal Plan, ranging in price from 35 cents to $1.00; also a la carte. City Ticket office, Chicago, 111 Adams St. Chicago depot, La Salle St. Station, cor. Van Buren and La Salle Sts., on the Elevated Loop. Write John Y. Calahan, General Agent, 113 Adams St., room 298, Chicago, for reservation of berths in through standard and tourist sleeping-cars, and other detailed information. 20—30A3t

very dry summer. From Decoration Day to about the middle of July we had only one good, soaking rain and 3 or 4 sprinklings. Last Saturday we had a very fine rain which lasted from about 5 o'clock in the evening until early Sunday morning. One thunder shower after another came up from the southwest and everything was well drenched.

CHARLES B. ACHARD.
Dupage Co., Ill., Aug. 1.

Bees Doing Extra Well.

I keep only a few colonies of bees and they are doing extra well. I have taken the American Bee Journal for only one year, but I would rather go without my daily paper than without the Bee Journal. H. J. ANDERSON.
Cass Co., Ill., July 20.

Good Increase—Honey-Flow Not Extra.

I lost 16 colonies of bees last winter, and this left me with only 5 in the spring. I have increased to 11.

The honey-flow is not very good.

E. E. KENNICOTT.
Cook Co., Ill., July 1.

Swarming—Small Crop.

On page 499, it is asked, "Is there ever really a case in which the bees swarm inside of 8 days after the first egg is laid in a queen-cell?" I answer yes, many times, with me. I think fully 20 percent of my swarms this year swarmed with eggs only or very young larvæ in the queen-cells. They were left to themselves, no cells having been removed before swarming. It would be from 12 to 16 days before a cell hatched, after the prime swarm issued.

In "Treatment of After-Swarms," page 500, it is said: "Hive the swarm and return it to the mother colony 24 hours afterwards." I find it better practice to remove all queen-cells and return the swarm at once. It will end all swarming from that colony.

The white honey crop here is small. It was too dry for clover, but basswood yielded well for a few days. My surplus is about 25 pounds per colony.

D. I. WAGAR.
Wayne Co., Mich., July 22.

Good Prospects for Fall Crop.

The prospects are fine for fall, as it is raining all around us. The Gila River is rising. Plenty of rain in the mountains means plenty of water with which to irrigate.

W. F. McDONALD.
Yuma Co., Ariz., July 28.

Bees Not Doing Much.

I bought 2 colonies of bees in the fall of 1902, and increased to 6 colonies last season, but lost 3 during the winter, although they had plenty of stores.

My bees are not doing much this season. They seem to have the swarming fever. I have 7 colonies now, and 1 decamped to parts unknown. My first swarm was on June 20; I hived them, and opened the hive to-day, cutting out all queen-cells but one.

There will be considerable buckwheat for the bees to work on, but I am sorry to say that the sweet clover

ITALIAN QUEENS!

Either Golden or Honey-Queens After July 1.

Our GOLDENS will come up with any other Golden strain. Our HONEY-QUEENS are what some breeders call "Red Clover Queens."

	1	6	12
Untested	$ .75	$ 4 00	$ 7.00
Tested	1.25	7.00	13.00
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2 frame Nuclei (no queen)	2.00	11.00	22 00

When Queens are wanted with Nuclei add price of any Queen wanted. We guarantee safe arrival of all Queens and Nuclei. Our Breeders may be returned after 30 days if satisfaction is not given. Cash must come with all orders. Orders are booked and filled in rotation.

Mr. Gus. Picaman, of Litchfield, Ill., in a letter of Aug. 3, 1903, says: "Send me two untested honey-queens. The one I bought of you two years ago is all right. There are no better."

Mr. Frank D. Gunderson, of Oconomowoc, Wis., says in a letter dated August 1, 1903: "I like your queens the best of any that I have ever had." This man placed an order last August for 24 Nuclei to be delivered this spring.

Address all orders to

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will be ready to ship
Fine Adel Queens!
By Return Mail on July 20.

S. F. Sampson, of Ronceverte, W. Va., says: "Your queens are good, and I can depend on them every time."

Robt. Forbes, East Milton, Mass: "Your Adel bees are away ahead of anything else I have."

Extra Tested Breeding Queens and my new book on "Queen-Rearing," $1.50. Catalog and a small booklet on queen-rearing sent free.

32Etf WENHAM, MASS.

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LICE SAP LIFE
That's how they live and thrive. You can't have healthy, profitable fowls or stock and have lice too. Let

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$10,000 WE HAVE JUST COMPLETED OUR TEN THOUSAND DOLLAR BEE KEEPERS' SUPPLY MANUFACTURING PLANT

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MINNEAPOLIS, - MINNESOTA.
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was all cut down just as it was about to bloom. The white clover flow is about over, and so is alsike, a patch of which I had sowed.

The bees are working in the supers, but don't seem to be making much progress.

I am night watchman at the University here. I gave a copy of the American Bee Journal to one of the professors to read, and the result is that he has become interested in bees, and has sent in his subscription. I promised him a colony this fall.

My bees were very weak in the spring. They dwindled down to almost nothing. GEO. M. SEIFERT.

Northampton Co,, Pa., July 21.

Bees Working in the Supers.

Bees have just commenced to work in the supers. I do not look for much of a crop this year. GEO. A. REED.

Saline Co., Kans., July 20.

Driest of Dry Seasons.

Bees began to swarm March 27, and the season was favorable while swarming lasted. I saved 25, while my neighbors had very few or none at all.

Bees are now gathering but very little honey. In many cases they have eaten more than they have gathered, where they had it stored. They are living from hand to mouth, as it were.

We are going through one of the driest of dry seasons, and the bee-forage suffers with all the rest.

A. B. CARPENTER.

Tulare Co., Calif., July 24.

Bees Doing Fairly Well.

My bees are doing fairly well this year, but last winter was "a corker." I lost 8 out of 15 colonies. I bought 12 on June 1, and 6 more last week. I have had only 3 prime swarms and one second swarm this year.

I joined the National Bee-Keepers' Association last spring, and wish the rest of the bee-keepers would "go and do likewise." LYMAN NORTH.

Page Co., Iowa, July 28.

Bees Storing in Supers—Strikes.

The bees have not begun to work on the fall flow as yet. Some of the colonies have stored 4 supers of 24 pounds each, and the majority 3 supers each. The others have stored some two supers full, and some one.

I hope the strike in Chicago has not affected you. The strikes are a curse to the country. We are just getting over the effects of the strikes here four years ago. D. C. McLEOD.

Christian Co., Ill., Aug. 1.

[We agree with you on the strike business. Arbitration is better.—EDITOR.]

Perhaps Milkweed Caused It.

In a recent number of the Bee Journal, a lady apiarist wanted to know what caused so many of her bees to die in the midst of the honey-flow. I was troubled in the same way, and I began to investigate as to the cause. I found on the common milkweed or silkweed (Cornuti) dead bees and those nearly dead, and those that were very eager

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STRAWBERRY AND VEGETABLE DEALERS
The Passenger Department of the Illinois Central Railroad Company have recently issued a publication known as Circular No. 12, in which is described the
best territory in this country
for the growing of early strawberries and early vegetables. Every dealer in such products should address a postal card to the undersigned at DUBUQUE, IOWA, requesting a copy of "Circular No. 12."
J. F. MERRY, Asst. Gen'l Pass'r Agent.
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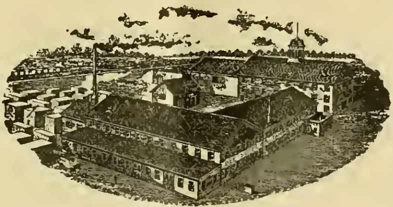

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Mail sample and state price expected delivered Cincinnati.
Queens Now Ready to Supply by Return Mail
Golden Italians, Red Clovers, Carniolans,
Price for Untested:
One, 75 cents. Six, $4.00. Twelve, $7.50.
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STANDARD BRED QUEENS.

BUCKEYE STRAIN RED CLOVER,
GOLDEN ITALIANS. CARNIOLANS.

By Return Mail. Safe Arrival Guaranteed.

PRICES	ONE	SIX	TWELVE
Untested	$0.75	$4.00	$7.50
Select Untested	1.00	5.00	9.00
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Two-frame Nucleus and nice Queen 3.00

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Cheap Rates to Boston via New York City and Boat.

$20.70 for the round-trip, from Chicago, via Nickel Plate Road, August 12th, 13th and 14th, with liberal stop-over at New York City returning, and also stop-over at Niagara Falls and Chautauqua Lake within final limit, if desired. Also rate of $17.75 from Chicago to Boston and return, via direct lines. Tickets good on any train on above dates and also on special train from Chicago at 8 a.m., August 13th. Final return limit September 30th, by depositing ticket. Through sleeping-car service. Meals in Nickel Plate dining-cars, on American Club Meal Plan, ranging in price from 35 cents to $1.00; also service a la carte. Write John Y. Calahan, General Agent, 113 Adams St., room 298, Chicago, for reservation of berths in through standard and tourist sleeping-cars, and full particulars. 19—30A3t

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NOW, while we can serve you PROMPTLY, and get them at BOTTOM PRICES.

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TENNESSEE QUEENS

Daughters of Select Imported Italian, Select Long-Tongue (Moore's), and Select Golden, bred 3¼ miles apart, and mated to Select Drones. No impure bees within 3 miles, and but few within 5 miles. No disease; 31 years' experience. All mismated queens replaced free. Safe arrival guaranteed.

	Price before July 1st. 1	6	12	After July 1st. 1	6	12
Untested	$ .75	$4.00	$7.50	$ .60	$3.25	$ 6.00
Select	1.00	5.00	9.00	.75	4.25	8.00
Tested	1.50	8 00	15.00	1.25	6.50	12.00
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Send for Circular.

JOHN M. DAVIS, Spring Hill, Tenn.

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of Hives, Sections, and Supplies of all kinds just arrived from G. B. Lewis' Factory, and are ready to fill orders quick. Send us your orders for everything. We have it.

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to get into the flowers. I think they must have been poisoned, some so much that they died, and others went to the hive and died there.

The colonies that were the best workers had the most dead bees in front of it.

When the hail killed, or rather destroyed, the blossoms, there was no more dying.

I should like to hear if there was much of this plant near where the sister bee-keeper lives.

If this is the cause, I don't know what can be done about it, as it seems to be on the increase in this section. Repeated cuttings and pullings seem to have no effect to destroy it.

There is but little honey and few swarms up to the present time.

R. K. SMITH.

Weld Co., Colo., July 24.

Poor Prospect for a Fall Crop.

It is very dry here, and the honey crop will be light. We have but little surplus yet, and that is all from basswood. It furnished a good flow while it lasted, for the bees that were in reach of timber. White clover has not helped us so far, and there is poor prospect for a fall flow, as the dry weather has been hard on the honey-plants.

I appreciate the American Bee Journal very much, and find it a great help in solving the various problems that arise in the management of an apiary.

R. H. BUCHNER.

Jackson Co., Iowa, July 26.

Heavy Loss in Wintering.

This year's honey crop is very light. There was a heavy loss of bees wintered out-of-doors. An experienced bee-keeper in this locality lost 75 percent. I had 8 colonies left out of 35, which was the worst winter loss I have had in my 14 years of bee-keeping.

I am making all the poor combs into wax, and trying to save the best ones.

HERBERT FREAS.

Ontario, Canada, July 23.

"Preparation for Swarming."

I notice on page 499, some questions are asked in an editorial headed, "Preparations for Swarming." I would like the privilege of answering those questions in the light of my locality, for I believe that locality has something to do with many of these problems that arise, and which, of course, cannot be solved by all alike.

There are many exceptions to the rule which is mentioned in the editorial, and the bees make these exceptions themselves without any interference on the part of the apiarist.

I allow natural swarming and pay no attention to queen-cells until swarming has taken place. Then I overhaul the parent colony to find out what provision has been made for a new queen, and I often find that there are no queen-cells started. This has been the case several times this season.

Sometimes they will have the cells about half built, at other times they will be sealed, and still other times (not often) there will be a young queen which has just emerged. Perhaps the latter may be a case of supersedure, the old queen having decided to leave.

I used to pay no attention to cells,

moving the parent colony to a new stand, and letting the bees do the rest. But after finding that many colonies were queenless about the time a young queen should be laying, I began to look for the cause. Although some of them were probably made queenless by the young queen being lost on her wedding flight, I am satisfied that the majority of them never started queen-cells at all.

Queer, is it not? But I can prove it to any one who will visit me during the swarming season. This may apply only to Jefferson County, in western Pennsylvania.

We have had a poor season so far—too wet, and cold nights. There is lots of white clover, but it does not seem to yield nectar when the sun does shine.

GEO. H. REA.

Jefferson Co., Pa., July 25.

Comb-Builders—Top-Bars.

It is not easy to believe that Dr. Miller would try to prove a case by the sort of evidence given in Gleanings in Bee-Culture, page 688. I suppose most of us know that capping done among the brood and old combs will be mixed with dark wax. But that is quite a different thing from the bees going down into the brood-chamber for wax.

Comb-builders, according to my observations, seldom or never leave their work until it is finished, or they are relieved by others that are loaded with wax, and which in turn are supplied with nectar by the field-bees that have served their time at house-work. They stay right there, seemingly spellbound.

The ⅝-inch thick top-bar is not inferior to the ⅞-inch in any point, but it is, in my judgment, superior in many points. I am of the opinion that the time will come when the ⅜-inch thick by about ⅞-inch wide, supported by a truss-wire, will be the general favorite among top-bars of all kinds.

The very best interests of the bee-keeper should be considered when we write.

S. T. PETTIT.

Ontario, Canada.

CONVENTION NOTICES.

National at St. Louis.—The annual session of the National Bee-Keepers' Association for 1904 will be held in September, at St. Louis, Mo.

Sept. 27 and 28 will be devoted to Association work and its interests. We expect many prominent foreign bee keepers to be present on these days.

Sept. 29, National Day.

Sept. 30, Inspectors' Day. Twenty bee-inspectors from all over the United States and Canada are counted on to introduce and discuss "The Diseases of Bees," etc.

Mr. N. E. France will exhibit, in the Convention Hall, a large map of the United States, Canada, Cuba and Europe. Each State and Country will have a shelf attached to the map with a one-pound sample of each kind of honey produced. Many other exhibits of special interest will be shown.

We expect to see the largest gathering of bee-keepers ever held in this country. A more detailed program will appear later.

GEO. W. BRODBECK, Sec.

Los Angeles, Calif.

Missouri.—The Missouri State Bee-Keepers' Association will meet Sept. 26, in St. Louis, in the same hall to be used by the National Bee-Keepers' Association. Further particulars later. Arrangements are being made for our accommodation by C. P. Dadant, in connection with the National Association.

Wakenda, Mo. W. T. CARY, Sec.

Ohio.—I beg to draw your attention to the prizes offered in the honey section by the Hamilton County Agricultural Society at their forthcoming Fair at Oakley Park, Aug. 16th, 17th, 18th and 19th. The Hamilton County Bee Keepers' Association has been instrumental in having this section added in order to stimulate and interest the honey-producers of this and adjoining counties. The executive committee would respectfully solicit their members and others to make entrees for competition in the class that suits their production.

In addition valuable "special prizes" useful to the bee-keepers are offered by the Fred W. Muth Co., C. H. W. Weber, and Mr. J. C. Frohliger. See Hamilton County Agricultural Catalog, page 39.

We would again remind you of our annual meeting on the second Monday of September. Preparations are now under way to make this the most instructive of any yet held by this flourishing organization.

Silverton, Ohio. WM. J. GILLILAND.

FOR SALE—in Arizona, on the Gila River, RANCH AND BEES.

150 colonies or more of fine **ITALIAN BEES** in L. hives, L. and H. frames, extra supers, with combs, 6 frame Cowan Extractor, Tanks, etc. This was a poor year on account of sand-storm at time of blossoming of mesquite; got only 185 cases. The honey from mesquite is water-white. We have W. Moody, cottonwood, willows to build up on in abundance; alfalfa yields good here; also a few of the honey-trees. Ranch of 80 acres, about 20 fenced. Alfalfa in stack worth about $100 to $150; alfalfa in seed, about $300 to $400; pair of fine mares, for work and saddle; two colts, 1½ years, as large as dams; wagon and harness. Adobe of 4 rooms, 2 beds, stove, and cooking utensils—a batch's outfit. Plenty of game; costs nothing for wood; 7 miles from station. New canal being put in. Hot for about 2 months; rest of year finest of fine. A good place for sore lungs. You buy for cash this bargain for $1,200. A good year for the bees will give you 20 to 30 tons of honey. About 15 acres are nearly ready to plant. Good stock country; anything you plant will grow here. Good reasons for selling. For more information, call on or address,

W. F. McDONALD,
30Atf PALOMAS, Yuma Co., ARIZONA.

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Please mention Bee Journal when writing

ITALIAN QUEENS,
BEES AND NUCLEI.

Choice home-bred and Select Imported Stock. All Queens reared in full colonies.

One Untested Queen.....$. 65
" Tested Queen....... .90
" Selected " 1.10
" Breeder " 1.65
" Comb Nucleus (no Queen)............ 1.00

All grades ready now. Safe arrival guaranteed.

For prices on quantities and description of each grade of Queens, send for free Price-List.

J. L. STRONG,
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Nickel Plate Excursion

to Boston, Mass., and return, account G. A. R. National Encampment, at $17.75 for the round-trip, from Chicago. Tickets good on any train August 12th, 13th and 14th, and on special train from Chicago at 8 a.m., August 13th. Final return limit September 30th. Also rate of $20.70 for round-trip via New York City and Boat, with liberal stop-over returning at that point. If desired, stop-over can be obtained at Niagara Falls and Chautauqua Lake within final limit. Three trains daily, with modern sleeping-cars. Particulars at city ticket office, 111 Adams St., Chicago, or address John Y. Calahan, General Agent, 113 Adams St., room 298, Chicago, for reservation of berths in through standard or tourist sleeping-cars. 18—30A3t

HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, July 19—There is a plentiful supply of honey of all kinds on the market with no sales being made; prices therefore cannot be more than on an asking basis. Very little if any choice to fancy comb, but a large amount of what would average No. 1 is offered at 10@12c; no sale for off grades or damaged lots. Extracted, white, 6@7c; ambers, 5@6c. Beeswax, 27@28c. R. A. BURNETT & Co.

CINCINNATI, O., July 7.—The sales of comb honey, which are made now, amount but to very little. Some fancy comb left from last season finds sales for 12½@13½c. The new is just beginning to be offered and small lots are coming in. Extracted for manufacturing purposes finds a fair demand. I quote amber in barrels from 5¼@5½c; in cans, ½c more; water-white alfalfa, 6½c; extra fancy white clover, 7½c. Beeswax, 28c. C. H. W. WEBER.

ALBANY, N. Y., July 21.—We are approaching the demand for new crop honey. There have been no receipts thus far to speak of—not enough to establish as yet. We could sell a limited amount of light comb at 15@16c. Old crop is well cleared out of this market, and we look for a good trade in honey this season.

Extracted, demand light; some small lots arriving; holding at 7c for white, and 6c for dark. Beeswax quiet at 28@30c. H. R. WRIGHT.

BOSTON, July 8.—Our market on honey, both comb and extracted is practically in a slumbering condition, as there is really no call whatever.

Prices remain as before quoted, but are really only nominal. BLAKE, SCOTT & LEE.

CINCINNATI, July 15.—The supply of honey at the present time is limited, with but moderate demand. New honey is beginning to arrive. We quote our market to day as follows: Amber extracted in barrels and cans, 5¼@6½c; white clover, 6½@8c. Comb honey (demand limited), 13@14c for fancy and No 1. Beeswax, 29c. THE FRED W. MUTH CO.

KANSAS CITY, July 25.—The receipts of new honey are gradually growing heavier, although it is a little earlier yet for much of a demand; with good weather, we look for the demand to pick up considerably. Market to day on fancy white comb honey, and No. 1 stock, $2.75 per case of 24 sections. Beeswax moving slowly at 30c per pound. C. C. CLEMONS & CO.

PHILADELPHIA, July 29.—There has been absolutely no call for either extracted or comb honey for the last two weeks. Quite a lot has been offered of new goods from the South, but not enough sales to fix a market price. Everybody is waiting expectantly to know what the outcome will be in the way of production. Some parts of York state have quite a crop, while others have little or none. Several large lots of extracted honey have arrived in our market. We quote as follows: Fancy white, 7@8c; amber, 6@7c; Southern, 5½@6c. Beeswax, 26c cash.

We are producers of honey and do not handle on commission. WM. A. SELSER.

SAN FRANCISCO, July 20.—White comb, 1-lb. sections, 12½@13c; amber, 9@11c. Extracted, white, 5½@6c; light amber, 5@5 c; amber, 4@4½c; dark amber, 3¼@3¾c. Beeswax, good to choice, light, 28@30c; dark, 26@27½c.

There are no heavy quantities offering, neither is there much demand. Inquiry is mostly on local account, and is largely for strictly select water-white. The proportion of latter sort is decidedly light in present supplies. Market for amber grades is not displaying any noteworthy firmness.

WANTED — COMB HONEY, WHOLESALE.— Will buy your crop outright, cash at your depot anywhere in the U. S., if price and quality are right. We have salesmen in nearly every market in U. S., but buy only through Thos. J. Stanley, Manzanola, Colo., our honey-man who spends the season in the West superintending our apiaries and looking after Western car-lots of honey. Address us there direct, stating what your honey is gathered from, what grade, the average weight of section, how packed, color, etc.; quantity, when you can deliver, and lowest cash price per pound properly crated and delivered to your depot. Would like to know about what the freight rate to your nearest city. We believe that our purchases are larger than any other firm or association.

Yours for business, **THOS. C. STANLEY & SON,**
29Atf MANZANOLA, Otero Co., COLO.
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OF ALL KINDS.
(Been at it over 20 years.)

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Apiaries—Glen Cove, L.I. Catalog free.

ST. LOUIS, 1904.

Bee-Keepers' Supplies Galore.
Catalog Free.
A No. 1 Smoker by mail, $1.

Bees, Honey and Beeswax bought and sold for cash.

LEAHY MFG. CO.,
1 ALTA SITA, EAST ST. LOUIS, ILL.

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Are pouring in, but we are filling them (almost every single one) within a few hours after they are received. We can ship

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UPON RECEIPT of ORDER
in regular packages.
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To say to the readers of the BEE JOURNAL that

DOOLITTLE...

has concluded to sell QUEENS in their season during 1904, at the following prices:

1 Untested Queen	$1.00
3 Untested Queens	2.25
1 Tested Queen	1.25
3 Tested Queens	3.00
1 select tested queen	1.50
3 " " Queens	4.00
Select Tested Queen, last year's rearing	2.50
Extra selected breeding, the very best	5.00

Circular free, giving particulars regarding each class of Queens, conditions, etc. Address,

G. M. DOOLITTLE,
24Etf Borodino, Onondaga Co., N. Y.

Please mention Bee Journal when writing.

27th Year **Dadant's Foundation** 27th Year

We Guarantee Satisfaction. What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS. PATENT WEED-PROCESS SHEETING.

Why does it sell so well? Because it has always given better satisfaction than any other. Because in 26 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies
OF ALL KINDS.

Langstroth on the Honey-Bee—Revised
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

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Of Having to Wait for
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National Bee-Keepers' Convention, St. Louis—Sept. 27-30

AMERICAN BEE JOURNAL

44th Year. CHICAGO, ILL., AUG. 18, 1904. No. 33.

APIARY OF CHAS. G. MACKLIN, OF WHITESIDE CO., ILL.

APIARY OF SILAS JOHNSON, OF MARSHALL CO., VA.

(See page 564.)

OUT-APIARY BELONGING TO E. D. OCHSNER, OF SAUK CO., WIS.

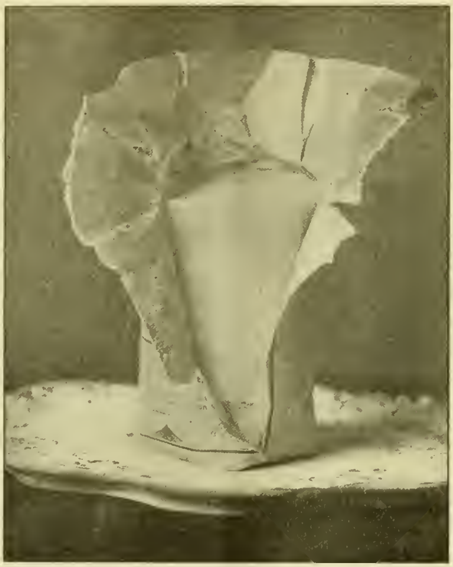
THE AIKIN HONEY-BAG

If you are a producer of Extracted Honey, here is something worth investigating. It is now proved a success. Last year we sent out many bags as a trial. This year we find it hard to obtain bags enough to supply the demand. They are being used almost everywhere. If your honey candies soft it will candy harder in these bags. There is no loss as in the case of glass jars. They are not hard to fill. They bring the selling price of honey down where everybody can buy. Develop a home market. No package is as cheap and attractive as the **AIKIN HONEY-BAG.**

Attractive but Cheap.

* *

Brings Trade and holds it.



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* *

EASY to handle...

We will print in name and address of producer or dealer, in different quantities, at the following schedule of prices for any size:

Lots of 100	$ .30
Lots of 250	.50
Lots of 500	.75
Lots of 1000	1.00

For each additional 1000 add 50 cents. Each change of name and address counts as a separate order. For instance, 1000 bags printed with four different names and addresses, 250 of each, would be $2.00; with 10 different names, $3.00, etc. As the bags must be printed before they are made up and coated, we can not change the label except in lots of 10,000 or over. We have some plain 2-lb. size of dark-drab paper which we can furnish plain at $2.00 per 1000 less than prices quoted above, or we can print a smaller special label in one color at above rates extra for printing.

We did not include these bags in our catalog this year because we wanted to see them more generally tested in different sections of the country, and proven a satisfactory package everywhere before doing so. We are prepared to supply them, and have arranged for a 1-lb. size in addition to the four other sizes sold heretofore. We are now supplied with all sizes.

1 LB. SIZE, 3½x5½.

100	$ .65
500	3.00
1000	5.50
5000 @	5.25

2-LB SIZE, 5x7½.

100	$ .80
500	3.75
1000	7.00
5000 @	6.60

3½-LB. SIZE, 6x9½.

100	$1.00
500	4.75
1000	8.75
5000 @	8.25

5 LB SIZE, 7x10.

100	$ 1.20
500	5.50
1000	10.50
5000 @	10.00

10-LB SIZE, 10x10½.

100	$ 1.50
500	7.00
1000	13.50
5000 @	13.00

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ESTABLISHT IN 1861

AMERICAN BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor. CHICAGO, ILL., AUG. 18, 1904. Vol. XLIV—No. 33.

Editorial Comments

Honey Market Quotations.

We have received the following letter dated Aug. 6, which shows the side of those who furnish the honey and beeswax market quotations for this journal:

> FRIEND YORK:—Lately we have received numerous letters from shippers of honey who expect as much for their crop as the quotations in the market reports of the various bee-papers. They are evidently not aware that these quotations are *our* selling prices, and not the prices dealers are paying for their shipments. In consequence thereof, we would beg to suggest that you, through the columns of your journal, impress upon the minds of these shippers this difference, and enlighten them on the subject, as the market reports, apparently, *are a detusion to the bee-keeping fraternity.*
>
> We are no commission firm, but buy for cash at a close margin of profit.
>
> Just returned from a ten days' trip through the North, and, in looking over the mail, find a number of letters of the strain above mentioned. Yours very truly,
>
> THE FRED W. MUTH CO.

We supposed that those who read the market quotations in the bee-papers understood that the prices given are the ones the dealers secure for the honey after they receive the shipment; and that the honey-producer or shipper will get those prices *less* the commission charged for handling, and also less the freight and cartage charges.

Of course, when a honey-dealing firm buys for cash, they must not be expected to pay the full market quotations, else where would they get their pay for doing the business?

We are very certain that shippers of honey will understand this matter all right if they will only give it a little thought. The honorable honey-dealers should be encouraged, for they are doing a good work for both the producer and the consumer. But in so doing they should not be begrudged the necessary commission or profit on the honey they handle.

Nominating National Candidates.

We have received the following notice from General Manager France in reference to the nomination of candidates in advance of the annual election of the National Bee-Keepers' Association to be held in November this year:

OFFICERS OF THE NATIONAL BEE-KEEPERS' ASSOCIATION TO BE NOMINATED IN ADVANCE OF ELECTION.

One of the latest amendments to the constitution of the National Bee-Keepers' Association provides that the Board of Directors may "prescribe equitable rules and regulations governing the nominations for the several officers," and the Board has just decided that the General Manager shall, in August, publish in the bee-journals a call for a postal-card vote of the members of the Association for the nomination of candidates for the several offices (stating the offices) to be filled at the next election. On Oct. 1, the General Manager and one other disinterested member chosen annually by the Board of Directors, shall count the votes, and the two men receiving the greatest number of votes for each respective office are to be candidates for said office; the names of the nominees and the offices for which they are nominated to be published *at once* in the bee-journals.

In accordance with the foregoing, I hereby ask all members of the National Bee-Keepers' Association to write me their choice of men as candidates for the following offices:

To succeed Jas. U. Harris, of Grand Junction, Colo., as President.

To succeed C. P. Dadant, of Hamilton, Ill, as Vice-President.

To succeed Geo. W. Brodbeck, of Los Angeles, Calif., as Secretary.

To succeed N. E. France, of Platteville, Wis., as General Manager.

To succeed E. Whitcomb, of Friend, Nebr., as Director.

To succeed W. Z. Hutchinson, of Flint, Mich., as Director.

To succeed Udo Toepperwein, of San Antonio, Tex., as Director.

October 1 the votes will be counted, and the names of the two men receiving the most votes for each respective office will be published in the bee-journals, then, in November, a postal-card ballot will be taken which will decide which of the nominees shall hold the office.

Send all votes to N. E. France, Platteville, Wis.

This is in effect what is known as an "informal ballot," in order to discover who are the leading candidates for each office to be filled. Of course, it will not prevent any member from voting for whomsoever he pleases in the final ballot in November, no matter who may lead in the informal ballot.

More Manufactured Comb-Honey Lies.

This time it is the Pittsburgh (Pa.) Gazette (dated July 24,) that has joined the ranks of the enemies of honey-producers, and published the following batch of misrepresentations:

HONEY-COMBS ARE MADE FROM OIL—ARTIFICIAL PROCESS IS GUARDED SEDULOUSLY FROM THE GENERAL PUBLIC —CURIOUS USES OF PETROLEUM.

Among the peculiar uses to which low-grade petroleum and the refuse of the better grades is now being put, is that of the manufacture of artificial honey-combs. There are four factories devoted to this product in different parts of Pennsylvania and Ohio, one of them being in the immediate neighborhood of Pittsburgh. The process for making the combs is said to have been evolved by a petroleum expert only after years of experiment, and it is so much of a secret that not only are visitors excluded from the factories in which the combs are made, but the locations of the latter are kept secret as far as possible from all but those connected with or employed in them.

The artificial honey-combs are so nearly like those made by the bees, in the chemical composition of the wax as well as the cell formation that the two can not be told apart even by experts. The idea of making them was suggested by honey-dealers of the class whose "bees" produce more of the sweet article than combs can be found for. It is asserted, however, that neither the empty nor the filled combs find a market in this State, on account of the rigorous enforcement of the pure-food laws.

We have already written the Pittsburgh Gazette concerning this matter, and we trust that all of our readers who can possibly do so will write at once, requesting a prompt correction and retraction of the above miserable stuff about comb honey.

It is exceedingly exasperating that the Wiley so-called "scientific pleasantry," or, really, the lie about comb honey being manufactured without the aid of bees, should still "go marching on" more than 23 years after it was first started in the Popular Science Monthly. The truth will never catch up, at this rate.

It is really coming to be a very serious matter. It is time the National Bee-Keepers' Association is taking a hand in the proceedings. It has already tried to do something about it in one or two instances, but we believe that it needs to begin a genuine campaign that means "war to the knife, and the knife to the hilt," on the newspapers that persist in republishing the Wiley comb-honey lie and its variations.

We hope this important subject will be taken up at the St. Louis convention next month, and something tangible result from the discussion.

In the meantime, let every reader of every bee-paper write to the Pittsburgh, Pa., Gazette, and demand an immediate retraction of their libelous statements about comb honey and honey-combs.

LATER.—Since the above was put in type, we learn that the Gazette for Sunday, Aug. 7, published a handsome retraction, one of the very best ever given by an offending newspaper. In next week's issue we hope to be able to reproduce it.

Bees Marking Their Location.

The action of a worker-bee in flying around in constantly increasing circles when it wants to fix in its memory a given location is a more common occurrence than many suppose. It occurs not merely when a young bee takes its first flight. It will do the same thing after swarming, or when moved to a new location at a considerable distance, and may be especially noticed if a feed of honey be given at a distance from the hive. After the first time loading up, the locality is carefully marked, for it will not do to forget where such a bonanza is located; but future visits to the same place are followed by no such precautions.

How to Uncap Honey Rapidly.

In the Bee-Keepers' Review E. D. Townsend tells how, by a single stroke of the knife, he uncaps the entire comb on one side. With spacing 1¾ inches there is chance for so deep a cut that no second motion is needed, but special care is taken that the comb be not held at such an angle that the cappings can fall back from the knife upon the comb. This last point is the secret of rapid work.

Bees Tabooed in Cuban Cities.

L. Maclean de Beers says in Gleanings in Bee-Culture that in most of the small towns of Cuba there is a municipal law forbidding the keeping of bees nearer to the town than a distance of about one-fourth to one-half mile. A law of that kind would not stand in this country.

Miscellaneous Items

Clips a Leg.—In his article on rearing queens, on page 534, Mr. Thos. Broderick calls attention to an error which was quite naturally made in this office. He writes:

> In my article on queen-rearing, I notice a most serious mistake, and one which makes the article entirely valueless. In the first column and third full paragraph on page 535, I am made to say: "Clip about ¼ inch off one of the large wings," while it should read: "Clip about ¼ inch off one of the large *legs*." The correction of that one word means success instead of failure, as all bee-keepers who practice clipping queens' wings know that it is very seldom that a queen is superseded from this cause, but when a leg is clipped it is altogether different.
>
> In order that the readers will better understand why I practice what some may choose to call a cruel method, I wish to add this:
>
> Years ago, while clipping the wings of a large number of queens, I accidentally clipped a leg off of two or three queens, with the result that they were all superseded immediately afterward. When I learned what happened to those queens it occurred to me that I might do the same thing purposely, and get the same results, and I have succeeded. Later I will show a sample of the work I have had done with such a colony. THOS. BRODERICK.

The Apiary of Silas Johnson, of Marshall Co., W. Va., appears on the front page. He wrote us as follows when mailing the picture:

> I am sending a picture of my apiary which is in the rear of my dwelling-house, and contains 69 colonies of bees. It is not all shown, as I could not place the camera so that I could get it all in. I am standing in front of a glass hive, holding a swarm of bees that has just clustered on a limb.
>
> I make all of my own hives, and they take the standard Langstroth frames. Some of them hold 8 colonies, some 3, and some 2, but all are alike on the inside.
>
> This has been a poor season for honey. There was plenty of bloom, but I think it was too wet to yield much nectar. I have not taken the honey off yet, but I do not think I will get over 18 pounds to the colony.
>
> I have had a good many swarms, but I put them all back and caged the queens.

The Apiary of Chas. G. Macklin, an attorney bee-keeper living in Whiteside Co., Ill., is shown on the front page this week. When sending the photograph he wrote:

> "In accordance with a request made by the editor of the American Bee Journal in the issue of July 14, 1904, I herewith send a photographic view of one corner of my apiary. The other corners do not appear on account of the difficulty in procuring a good light, principally due to the dense foliage. My time being taken up largely with my professional duties, my assistant, who appears in the background of the picture, has full and complete charge and management of the various colonies shown, as well as of almost everything else around the premises.
>
> "I make my own hives of the 8-frame pattern, and find that by so doing it is a great saving over the prices asked by the trust. My apiary is run solely for comb honey, and as a means of relaxation can not be surpassed."

American Bee Journal Convention Reports.—A Straw in Gleanings in Bee-Culture reads as follows:

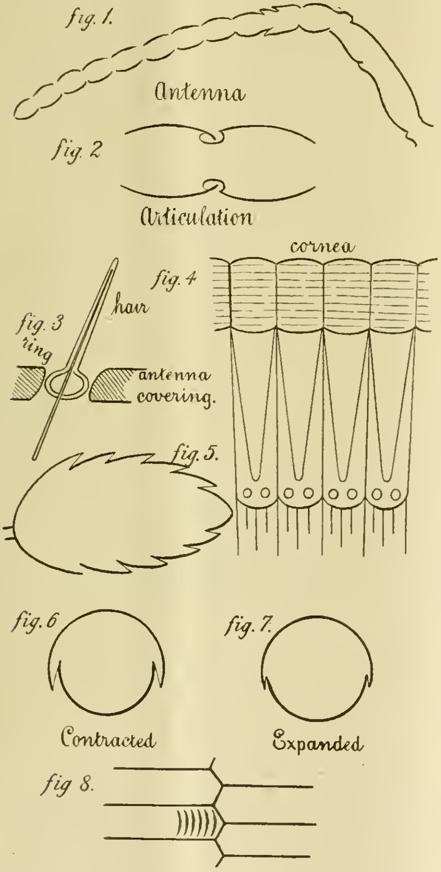
> Stenog speaks of the good work of the American Bee Journal in convention reports, and of Gleanings leaving that field free. What a blessing that is will be appreciated by those who are familiar with European bee-journals. After one of the big conventions, different journals will have page after page of the same thing reported, and some of the little fellows will tag along after, copying from the others. Then, too, there is a big difference in the time of getting out the reports. Mr. York will rush through a long stenographic report in a very few numbers, while foreign reports will string along for a year—sometimes longer!

Contributed Articles

"Bees Packing Pollen in the Cells."

BY ARTHUR C. MILLER.

On page 294, is an article by Mr. Getaz on the above subject, with figures shown herewith. His opening paragraph cites the questions of a correspondent as to how bees can ram the pollen into the cells with their heads when such delicate and tender organs as the eyes and antennæ constitute the forepart of the bee's head. Then he says: "The correspondent is widely mistaken in speaking of the eyes and antennæ of the bees as 'delicate and tender organs.' Bees and other insects are not built on that plan."



I chanced to be the person who first challenged the "battering ram" story, and endeavored to show the absurdity of the theory that the bee so uses her head.

Mr. Getaz has confused structure with function. Structurally, the bee is relatively strong, and the head is quite hard enough to pack the soft pollen, even more compactly than we find it. In fact, if the head was not strong it could not support the jaws with which the bee does so much work. But the sense-organs distributed over the head are exceedingly delicate, and while well protected from injury by such blows as ordinarily come to the bee, their perfect action is dependent upon their freedom from dirt and dust.

If one has not a copy of Cowan's or Cheshire's books, it will be worth his while to turn to the article by Mr. Getaz, referred to above. For the sake of more ready explanation, I reproduce the illustrations used by Mr. G.

In Figs. 1 and 2 are shown the joints of the antennæ, while Fig. 3 shows one of the organs of the latter. There are several other organs. In the antennæ are believed to be located organs of touch, smell, hearing, and an organ whose exact function is unknown. Fig. 4 shows a section of the compound eye, but fails to show the hairs which are placed to protect it.

Unbroken pollen-grains are quite fine enough to lodge in many of the depressions and between the hairs, but when they burst, or the husk opens, a far finer powder is set free, which, if the bee "rammed the pollen in with its head," would completely clog these organs. In gathering pollen the bee sticks it together by some moist substance, either honey or some gland secretion. This not only holds the pollen-grains together, but causes them to swell, and some of them burst. This moisture, together with the starchy properties of the pollen, are accountable for the density and compactness of pollen after it has been stored for a time.

Mr. Getaz further says: "Exactly how the packing of the pollen in the cells is done no one can tell. That the pollen is packed, tamped and rammed hard, every one knows."

Freshly stored pollen is not "packed hard," but soon becomes so, for the reasons I have given above. Many persons now know just how it is packed, i. e., by being spread and kneaded by the bees' mandibles. I have watched them many times, have shown it to many others, and if Mr. G. were here I could show him hundreds of workers busily at it.

Lots of things which have been accepted as true about bees are being found to be wrong. It is hard to unlearn that which we have grown up believing, but it is what we often have to do. Many statements pass current because they were made by some one with a *reputation* for skill, accuracy, and close observation, the public not stopping to consider whether or not the reputation is well-founded. In this instance it is not necessary for Mr. Getaz, or any one else, to take my word for it; they can all go to see for themselves. Providence Co., R. I.

⁂

Extracting Supers and Swarming—Excluders

BY C. P. DADANT.

Shallow extracting-combs are blamed for making bees swarm, in Mr. Doolittle's conversation. But don't the Dadants use such combs? and are they not notorious for the small amount of swarming they have?"

The above quotation is taken from the "Stray Straws" of Dr. C. C. Miller, in Gleanings of July 1. Dr. Miller is right in his surmise, but nevertheless I believe that Mr. Doolittle may have been right in his affirmation, as much depends upon what kind of shallow extracting frames are used. I have seen extracting-supers of the same size as the comb-honey supers for 4¼ sections. These supers are altogether inadequate, in my opinion, for extracting purposes. We should bear in mind that the saving of the comb is of very great advantage to the bees, and the room which is ample for them, when comb honey is produced and they have to build all the comb, is entirely too narrow when supers already full of built combs are supplied.

We use a super with frames the side-bar of which is 6 inches in depth, the super itself being 6⅝ inches deep. We have also a larger hive than the ordinary Langstroth 10-frame hive, our size of frame being 1⅛ inches longer than the regular Langstroth. So our supers have ample room for from 50 to 65 pounds of honey, and are more than one-half larger in capacity than the small supers referred to. We very often use two or three of them, adding them as necessity requires, but always before the bees have all the combs filled, so that they may never feel short of room.

That is how we have succeeded in almost abolishing swarming in our apiaries. We know that bees have the greatest incentive to swarm when the hive is getting crowded, or when, in a very good honey-yield, they find themselves short of empty combs, although with a notable empty space still unoccupied by combs at all. I have known colonies to swarm many times when the supers were entirely empty, but rarely have seen swarms issue from hives that had been supplied with a large quantity of empty combs in good time, or before they began to feel the urgent need of them.

QUEEN-EXCLUDING HONEY-BOARDS.

I wish also to make a few remarks upon the use of the queen-excluding honey-board, of which several have spoken as an indispensable implement for extracting. Mr. Hasty has even gone so far as to say that the use of a queen-excluder ought to be compelled by law.

The experience on which my critics have based themselves to assure us of the absolute need of excluding honey-boards is certainly dissimilar from mine. As the reader knows, the Dadants have been the champions of extracting and extracting-supers for 30 years or more, and in all my experience I have seen but very few seasons in which there was brood reared in the supers.

But the reader must remember that not only are our supers large, but our hives also are larger than the average. There is ample room in the lower story to accommodate a very prolific queen, and she rarely finds it necessary to go up into the upper stories. The only instances when I have found the queen in upper stories were when the season had been very long and irregular, some days being good for production while a number of days were unfavorable, so that the bees consumed, during a part of the time, what had been harvested during the preceding days. The queen has also occasionally gone into the supers when in search of drone-combs, for we aim to remove all drone-comb from the brood-chamber as regularly as possible. Queens sometimes prefer drone-combs to lay in, probably when a long season of breeding has caused them a certain fatigue. It would seem as if laying drone-eggs rested them. If there happens to be a patch of drone-comb in the super, the queen, when in this condition, is likely to find it and lay eggs in it. But I would not think of resorting to the queen-excluder to prevent that. I would much prefer doing the same thing with the supers as with the hive-body—remove all drone-comb, wherever found, and replace it with worker-comb.

My main objection to the queen-excluder is its being glued so fast to either the super or the brood apartment, or both, as to become a nuisance to remove. It may be that our location is a better one for propolis than many others. Be this as it may, I find that after a few weeks such implements become so glued to the other parts of the hive that you have to damage them to remove them. Then, an excluder is always more or less in the way of the bees. I would much rather put up with the little inconvenience of an occasional patch of brood in the super than with the annoyance of an implement which is difficult to handle.

When Mr. Hasty spoke of wanting a law to compel those who produce honey to use queen-excluders, I understood that he meant this as a question of hygiene, probably under the idea that brood found in the extracting-combs would be thrown out by the extractor and create a nuisance, spoiling the honey by the dead larvæ. This is a matter that has never given us any concern, and for several reasons:

In the first place, the honey can usually be extracted out of brood-combs without throwing out larvæ, if one is a little careful.

Secondly, we rarely find unsealed brood in the supers at the end of the crop, when the honey is ripe and fit to extract, because at that time the breeding has already decreased. Sealed brood can not be thrown out, and will not be killed or injured in any way by extracting the honey, though it may cause the chrysalis to be a little dizzy while the whirling is going on.

Thirdly, it generally happens that the combs that contain brood have little else in them, and they are not usually put into the extractor at all.

We are the only ones who do not use queen-excluders between the stories. In the replies to the questions asked about this matter, I noticed that Mr. France, who is a very practical man, and a very large producer of first-class honey, emphatically sustained the non-use of the excluding honey-board for extracting. If I am not mistaken, Mr. France uses what the Europeans call a horizontal hive, a hive in which the surplus honey is harvested from brood-combs at the side of the brood-nest, and this hive is not adapted to queen-excluders.

A little care in the management of extractor-combs will remedy all the possible evils feared from the non-use of the excluder.

In the production of comb honey the conditions are entirely different. The laying of eggs and rearing of brood in sections will change the color of the comb and render the honey unfit to be classed as first quality, no matter of what quality it may be in reality. Breeding in extracting-combs will leave them rather better for the extractor, after the bees have hatched out, for those combs are less brittle, and more safely handled. Hancock Co., Ill.

Convention Proceedings

Report of the Fourth Annual Meeting of the Texas State Bee-Keepers' Association, Held at College Station, Tex., July 5 to 8, 1904.

REPORTED BY LOUIS H. SCHOLL.

The meeting was called to order by the Secretary, Louis H. Scholl, in the absence of the President and the Vice-President, at 2 o'clock Tuesday afternoon, July 5.

Mr. F. L. Aten was appointed temporary chairman of the meeting, whereupon the Secretary gave his annual report.

The election of officers resulted as follows: W. H. Laws, president; W. H. White, vice-president; Louis H. Scholl, re-elected secretary-treasurer; and H. H. Hyde, assistant secretary.

ESSENTIAL QUALITIES OF A SUCCESSFUL BEE-KEEPER.

"What are the essential qualities for making a successful bee-keeper?" L. Stachelhausen spoke as follows:

I am on the program to answer this question. If somebody had asked me to do so I would have chosen another problem, as I have a different opinion in this respect from the majority of bee-keepers.

Generally, it is believed that quite special qualities are necessary to make a successful bee-keeper. I do not think so. To be successful in any business some qualities are necessary. At first a man must have sense enough. More for some kinds of business than others, that is all. A certain degree of tact is necessary, but more especially industry, and practical and scientific knowledge.

There is no question about it, that a bee-keeper must be industrious. If a man thinks the bees work for nothing and board themselves, and that it is easy to make money by keeping bees and sitting down in a rocking-chair all day, he will soon find out that he is mistaken. In bee-keeping everything must be done right, and at the right time. The lazy people generally do a thing either not at all or not properly, and at too late a time. But the same quality of industry is necessary in other occupations. The lazy fellow will succeed nowhere. I mention this only because some have the idea that bee-keeping is so very easy.

The most essential quality for a successful business man is the necessary knowledge. The whole difference is in the way in which we obtain this necessary knowledge, and how much of it is necessary to run a certain business.

In some occupations a little practical experience is sufficient to be successful. In others (and bee-keeping among them) a large degree of knowledge and a good deal of practical experience are necessary to be successful.

Right here comes in the difficulty in bee-keeping. To obtain the necessary knowledge for other occupations the apprentice goes through a school especially established for this purpose; or works for some time with a master who informs him practically and scientifically. The beginner in bee-keeping very seldom has occasion to use one or the other way, depending upon the reading of good books and bee-papers.

I have worked with bees for nearly 50 years; kept bees here in Texas for 25 years, and have seen large and small apiaries started all around me. The most of them disappeared very soon. In every case of such failure I found that the man either did not read or did not understand the little that he did read.

Now, we have to consider another point. This self-education by reading and studying is the most difficult way to obtain a certain knowledge; some degree of elementary knowledge is necessary for it; some energy, and I might say a love for science.

A much easier way it is if we obtain this knowledge by and by, if we practically work in the apiary under the supervision of a well-educated apiarist who explains everything—every operation not only practically, but in every case gives the scientific reason why something must be done in just this way, and not in the other way.

For this we Texans can be proud, as we have here on the college grounds such a school in which the necessary knowledge can be obtained. As far as I know, it is the only school of this kind in the United States, and probably in the world.

I will say again, to be a successful bee-keeper the man must possess the necessary scientific knowledge; then, and only then, he will know always what to do if something unexpected happens in the apiary, and he will be able to improve his practical operations.

The late Baron Berlepsch, one of the prominent bee-keepers of Germany in the last century, said: "At first learn theory or you will remain a bungler in practical bee-keeping all your life."

Here the word "theory" has another meaning from that for which it is generally used here in the United States. Here theory means merely a hypothesis not entirely proven. In Germany the word is used for science.

L. STACHELHAUSEN.

F. L. Aten said that the greatest essential in the making of a successful bee-keeper was an industrious person who was able to stick to his business.

(Continued next week.)

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Melting Old Combs into Beeswax.

I want to tell the sisters how I melt combs. I take a two-bushel sack, fill it with old combs, and place it in a large kettle of boiling water. With a strong paddle prepared for that purpose, I begin mashing it, holding the mouth of the sack in my hand. When the wax begins to rise pretty freely I begin dipping it off, pouring it into a gallon vessel of cold water before it gets too hot to handle. I then pour the cooled wax, water and all, into a sack, and the water runs out leaving the wax. I keep stirring the old combs till all the wax is out. I then dip it all off as well as I can. If the sack is dipped up and down in the hot water several times the wax will run off next to the kettle as the sack is raised. Then raise it quickly (if you have melted and stirred it well the refuse will be so clean that it will not stick together when cool), pour the wax back into the kettle and melt it thoroughly, so you will have a nice cake. If left crumbled it will mold and make the wax dark.

Pickens Co., Ga., July 18. MRS. QUEEN B. HALL.

Keeping Bees in a Garret.

I am perplexed about my bees, and write to see if you will kindly help me. We got a swarm, and put the brooder in a small box in the garret. They are storing considerable honey, but is there not some way in which we can save the bees, so that they will increase as they would in common hives? Can we put a brooder on the one we have, and will the new swarm go into it another year? There are so many bees that all of them can not winter in the brooder. If we had put a super with sections in it on the brooder, would they have stored honey in it? It is going to be very unhandy to cut the comb and divide it to sell, as we want to sell part of it. Do you know of any one who is keeping bees in this way? MRS. L. WILSON.

Rutland Co., Vt., July 26.

This letter was written to one of the leading supply-dealers, who has sent it to me for reply.

I don't just know what you mean by the brooder, but as nearly as I can make out you want to have the bees in the garret so open that you can get at the combs to cut out honey whenever desired. This has been thought of more than once, as a very handy thing, but it is doubtful that you could get any practical bee-keeper to try it, and just as doubtful that it would be a success if tried.

Of course, it sounds very nice in theory to have the combs all open so you could take a knife and plate any time and cut away what you desired of the nice, white honey, but some things are not so nice in practice as in theory. When bees are left to themselves in this way you will find that a large proportion of the honey they store will be in the upper part of the combs, while the lower part of the same combs will be occupied with brood. Plain to see that you can not cut away any of this honey without cutting away the brood at the same time, and that wouldn't do at all. To be sure, there might be some combs at the side without any brood, but the amount would not be large.

I have been told that years ago oily-tongued agents went through the county selling what were called bee-palaces. A bee-palace was something like a mammoth hive with a door in one side. A common box-hive was to be set on the palace, and then the bees were to work down and fill the palace. Then, when the housekeeper had company to tea, and wanted to have a nice plate of white honey to decorate her table, she was to go to the bee-palace, open the door, and cut out what she needed, close the door, and proudly go her way. The hives of bees were put on the palaces, but I am not told that the latter part of the program was ever carried out.

Boxes might be put over bees in the garret, but if the bees were not confined as in a hive they might not readily enter the boxes. Neither would it be practicable to have them so arranged that the bees would swarm and hive themselves. They would be little inclined to swarm with unlimited room, but if they should swarm they would go out into the open air and have to be hived like any other swarm.

Now, if I have made the wrong supposition in the case, please write saying what is meant, and what kind of a brooder you refer to, and I'll try again.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

LENGTH OF FOUNDATION SPLINTS.

Lots of us, I take it, Dr. Miller, failed to catch on to the idea that your foundation splints might just as well be an eighth of an inch shorter than the space they were to cover, and so be handier to put in. Page 457.

HONEY-DEW.

When honey-dew gets so bad that a single comb of it keeps a swarm from running into a hive, one inclines to say, "Not any honey-dew for me." Page 458.

PROPOLIS IN HEALING SALVES.

Get a lot of propolis and heat it well, and mix it well with olive-oil. Let the oil have time to extract the virtues of the more solid ingredient; then heat it real hot and pour it off, leaving behind such of the propolis as shows too much inclination to go to the bottom. This is presumed to be a healing salve when it gets cool. (*Anything* made into a salve, provided it is not positively injurious, will exclude air and keep out microbes, and thus favor healing.) When I scrape propolis several cool days in succession (propolis reduced to dust gets thick on everything at such times), I find the backs of my hands inclining to get sore. Too much healing power exercised on them, eh? Page 461.

THE REAR WOODEN FEEDER.

The Simplicity wooden feeder, made very much larger and modified in form to put under the back end of a hive, is what we see on page 462. E. W. Alexander likes it after feeding tons of syrup with it; and that is a pretty strong recommendation. Several at once answer well to feed for winter. I should guess that one strong point of it is that robber-bees drawn by the smell of warm feed bob around at a place where they can't possibly get in, and let the entrance alone. Perchance its weak point might be liability to get rotten and spoiled.

A ROUGH BLUFF ON DUFF.

Mr. Duff
He had bluff
Big enough—

Laid up the heathen-idol image of the demijohn with stones, and got it printed in the paper of a Prohibition-candidate editor. All'ee same his apiary is pretty—and just now he is sober. Page 465.

FRAMES CROSSWISE OF THE HIVE.

As to frames running "the wrong way of the hive," none of the experts seem inclined to advocate them with any enthusiasm, and few are very sharply opposed. If the inquisitive beginner *wants* to try a few that way nobody will throw bricks. Page 469.

BEE-TREE LAWS AND JUSTICE.

John Doe finds bees in a tree belonging to Moses Moe. Marks his name on the tree. Calls on Mr. Moe to get his permission to cut the tree. Moses does not quite want the tree cut down; talks and talks, but hangs off about giving the permission. Next Richard Roe also finds the bees, cuts the tree, carries off the honey, and *then*, falsely claiming that John has turned his rights over to him, calls on Moses Moe to settle up. Moses says that is not of very much consequence, and that is the last of it so far as he is concerned. (Known to be that sort of a man.) Now the public feeling, which, in this case, is undoubtedly the correct feeling, is that Richard has stolen John's bees. If I understand the article of Henry Klein correctly, law will not touch Richard for anything he has done toward John. Law does not love simple justice so much as it does the consistency of a dry-bones logic. (Richard could not steal till John owned; and John could not own till he first had them in his power.) In the good time coming courts, lawyers and judges (if there are any such things then) will care more for simple justice than they do for words, names and quillets. They will feel sincere regret, and a measure of humiliation, at every such failure of law to provide justice; and they will not feel, their personal duty ended till they have got the legislature to prevent a repetition of it. Page 470.

MIXING VARIETIES OF HONEY—UNRIPENESS.

Holtermann, in the New York convention, went to the bottom of things more completely than essayists usually do. Good paper. Right that we should guard against mixing two different grades of honey in extracting. But I must nevertheless put in a word for those localities where the crop is small, and all extracted at the end of the season. Hardly practical to keep kinds separate then, the difficulty and fuss of doing so being too great. The loss of being unable to separate the kinds is more than made up by the increased ripeness of the whole. Sometimes bees work lively at bringing in a very poor article quite late and leave a lot of it unsealed. That can be extracted first, before the ripe honey is uncapped. Glad to see Holtermann in harmony with the best demands for ripeness. Listen once more to this flaming-sworded sentence of his: "Too much of the crop leaves the hive when it is really not honey, but when it is still in its stages between nectar and honey."—Pages 470-472.

WASH HONEY-EXTRACTOR WHEN NEEDED.

Surprised (and perhaps the surprise was a little *pleasant*) to hear Mr. France say, "Never wash the extractor till you want to use it." I have often done according to this maxim, but supposed the conduct to be somewhat disgraceful, and tending to get the tin coating off the inside the implement. Page 472.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Honey Quotations in the Bee-Papers.

1. What are honey quotations in bee-papers worth to the honey-producer, anyhow? If you write to any one quoting prices for his city, his reply is always below prices given in the paper. Is that your experience? Iowa.

Answer.—I have had no experience in the matter lately. Years ago, the daily papers of Chicago quoted prices that were always *below* the market. I have supposed that nowadays the quotations in the bee-papers were the same as you would get in private correspondence. If you get different quotations from those published, it would be a good plan to send them to the bee-paper publishing the quotations. If any quoter is giving wrong quotations he should be brought to the mark.

Do Drones Feed Themselves?

Don't you think the drone sips the water from the honey? It has been my observation that we find him on the combs that contain the latest honey from the fields. I never saw a bee feeding a drone, but have seen hundreds helping themselves. It is absurd to say that a bee must feed the drone or he will go hungry. If I am not correct, why do they drive drones out? My experience has been, a fair quantity of drones, lots of honey. Arizona.

Answer.—Now, that's strange; you never saw a drone fed by workers, and have seen hundreds helping themselves, while I never saw one helping himself, but have seen them fed by workers. But I never made a careful watch in the matter, and have trusted the word of the authorities that it was necessary for the workers to feed the drones. Perhaps others can give their testimony.

Wintering Bees—Chaff-Hives—Danzenbaker Hives.

1. If you had to buy new hives, and propolis was not plentiful in your locality, would you buy Danzenbaker hives?

2 I have 5 colonies of bees in 10-frame dovetailed hives. Can they be wintered in a cellar with a furnace in the adjoining room, or would they be safer on the summer stands?

3. Which do you think are the better, and which do you use more, 8-frame or 10-frame hives?

4. What is your opinion of chaff-hives?

5. Do you think strong colonies of bees in Danzenbaker hives, with supers full of chaff, and telescope caps over all, would winter well on the summer stands, in latitude 41?

6. If I put 9 frames in my 10-frame hives, with a division-board on each side, it leaves a ½-inch space behind each. Will the bees build comb in those spaces rather than in the supers?

This is my first year with bees, and I am 17 years old. Illinois.

Answers.—1. No.

2. I don't know. Perhaps in your locality on summer stands. But try two or three in cellar so as to compare.

3. I use 8-frame hives, but for extracted honey I would have 10-frame or larger. Indeed, for comb honey 10-frame hives are safer, and I should prefer them if I did not want to give very close attention to my bees, and if I didn't care for the heavier handling.

4. If you try them at all, better do it on a small scale. Some favor them, but there is hardly as much said in their favor now as a few years ago.

5. Yes.

6. No, unless very badly crowded, and perhaps not then.

Harvesting Buckwheat.

Allow me to enlighten you on the buckwheat question (page 522). Buckwheat is never tied—in fact, it doesn't need to be tied, for it "sticketh closer than a brother." It is set up in bundles of a convenient size to handle, the work being mostly done with a hand-rake, although it can be done with the pitchfork. The tops are drawn somewhat closer than the bottom, which helps to shed the rain, and brace against the wind.

This is written in all kindness, as part payment for the many good things that I have gotten from your book and other writings. Pennsylvania.

Answer.—I am exceedingly obliged to "Pennsylvania" for his correction. As he lives right in the locality where my observations were made many years ago, I have no doubt the practice was the same then as now; but I had not supposed the bundles would stand without tying. But there is a whole lot of things I don't know yet.

Eating Extracted Honey Stored by a Foul-Broody Colony—Vinegar Made from Foul-Broody Honey.

1. What are the effects upon the human body of eating extracted honey stored by a colony of bees which has foul brood?

2. Would you consider vinegar made from honey stored by a foul-broody colony of bees to be perfectly safe to use?

3. Will the fermentation process in making vinegar destroy the germs of foul brood? Of course, I take it for granted that vinegar can be made from this kind of honey. Illinois.

1. I don't believe there are any perceptible effects.

2. Yes.

3. No, the germs would probably be unaffected.

Answering more fully the spirit of your questions, if any part of the rotten brood should be in either the honey or the vinegar, while it might have no perceptible effect on the health, it would be filthy for table use. But honey taken with proper care from a foul-broody colony, even though it might not be safe to feed bees, would not be seriously affected for human consumption by the spores, which are merely infinitesimal seeds of a little plant.

Cutting Out Queen-Cells—Queens Mating with Selected Drones—Mixing of Drones.

1. Is it practical, on the issue of a swarm, to cut out queen-cells and give to nuclei if they are uncapped?

2. If a swarm should issue, say June 1, on what date should they be carried in the cellar in order that they may be carried out in the evening to have the queen mated by selected drones?

3. Upon giving a frame of eggs and just hatching larvæ on June 1, at mid-day, on what date at mid-day should I cut out cells?

4. Will drones fly and mix from one colony to another, say black drones and Italians in the same apiary? England.

Answers.—1. Yes, it is practicable, but hardly advisable. To rear the best queens the cells should be left in strong colonies certainly till they are sealed, if not until the princesses emerge.

2. There is too much variation in the matter to name a definite day on which the young queen will be ready to take her nuptial flight. If a prime swarm issues June 1, the young queen may emerge from her cell anywhere from the 5th to the 10th, or later, according to peculiar conditions. Then they do not all take the nuptial flight at the same age; it may be when 5 days old, or it may be when older. It is a rare thing, however, for a young queen to emerge sooner than a week after the swarm issues, and if she should take her wedding-flight at 5 days old, that would be 12 days after swarming, so if you should begin the cellaring the night of the 11th, and carry out the hives each afternoon until fertilization took place, you would be pretty safe.

3. June 11 is as late as it will be safe to leave them without fear that some will hatch.

4. Yes, you may find drones of any colony in any other colony in the apiary.

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  Hundreds of flowers in the sunny weather;
Hundreds of dewdrops to greet the dawn,
  Hundreds of bees in the purple clover,
Hundreds of butterflies on the lawn,
  But only one mother the wide world over.
—Selected.

A Fair Crop of Honey.

I have about finished taking my crop of honey for this year, and have a fair crop of basswood extracted honey of as fine a quality as I ever produced, so thick that it will run slowly out of a large honey-gate. Clover was not very good, but we got a little. The weather was too wet and cold for clover.

G. W. WILSON.
Richland Co., Wis., Aug. 4.

Dark Honey—Introducing Queens.

I am new to the bee-business, and do not know much about bees and honey, except that the former will sting and the latter is sweet.

I wish some one would tell me why the honey that mine have stored is so dark; it looks like sorghum molasses.

We have had too much rain so far for bees to do much here.

I have read in the Bee Journal a good deal about introducing queens. My plan is to adhere strictly to the rules sent with the queen, and I have no trouble at all. Of course, the colony should be queenless 2 or 3 days previous to the introduction. I take the cork out so the bees will have free access to the candy, and set the caged queen and her retinue on the frames under a quilt. The bees do the rest, and I have not lost one yet. If those rules are followed there is no danger. I always buy tested queens.

I receive the American Bee Journal regularly every week, and like it very much. I read and re-read every number with a great deal of interest. When my time expires I'll renew my subscription. W. C. EDGEWORTH.
Pulaski Co., Ark., Aug. 2.

Working Up a Home Market.

First, try to get the editor of your local paper to publish an article on the merits of honey. Manage to include in this article a few of the most astonishing facts that you know about bees, and he will be more likely to accept it. If he does publish it make him a present of a section of fancy comb honey.

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name and address on every pound of your honey. Force upon your customers the fact that comb honey cannot be manufactured, and that it does not pay to feed sugar, glucose, etc., to bees.

Next get some little pamphlets, such as "Honey as a Health Food," etc., and distribute them among your customers. Secure the consent of the editor of your local paper to publish in it a number of recipes in which honey must be used.

If people get angry and think that your bees are a nuisance, do not fight with them, but give them some honey.

We have thus far had a fair season. We had a long, cold spring, followed by 3 or 4 weeks of fine bee-weather. It is getting very dry now, but we are looking for rain soon. If we do not get it there will be very little honey. New honey is in great demand.

Geo. S. Graffam.

Penobscot Co., Maine, July 30.

Bee-Paralysis—Vitality of Young Brood.

Every season I have lost one or more colonies with bee-paralysis. It would make its first appearance any time from very early in the spring to the middle of June. Those colonies having it badly would dwindle away altogether in two or three months, others would show signs of it for a month or two and get over it. The strong colonies seemed to have it worse than the weaker ones.

So when on June 9 I found a strong colony which occupied two full stories, showing signs of the disease, I determined to try the sulphur remedy. About the middle of the day I took out every frame and dusted the bees with finely powdered sulphur, using a yeast-powder tin with holes in the cover. For five or six days they grew much worse, showing that it was a bad case. After that they began to improve, and in about 21 days there was not a sick bee to be seen. I did not take away the unsealed brood and eggs, as recommended by O. O. Poppleton, on page 535 (1903), and on looking in three days later I found that although some may have been destroyed, a good proportion were uninjured. About 10 days later I found another colony with the disease, and applied the sulphur with the same results. When I have occasion to do it again I shall take out any combs that have much unsealed brood or eggs, shake the bees off, and, after dusting the bees, return them at once to the hive.

I had an experience lately with bees choosing larvæ too old for rearing good queens about the middle of June. Having found a fairly strong colony with plenty of sealed brood but no queen or queen-cell, I put in a frame of eggs and young brood from my best queen. When I looked 10 days afterward, I was surprised to find a queen already out, and two or three more ready to emerge; after a longer time than usual the one first out—she was scarcely larger than a worker—began to lay; there was only a small patch of eggs, and at the same time there were three queen-cells with eggs in them. I need hardly say that I killed her at once.

The great vitality of young brood surprised me lately. I found in June a

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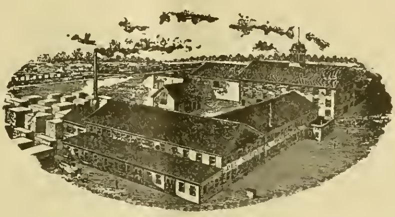

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comb about two-thirds full of drone-brood, most of it ready for sealing. I took it out, and thinking to kill it kept it in the bee-house close to an open window for three days. The weather was rather cool, the temperature varying from 45 to 60 degrees. I then put it into the queenless hive mentioned above to have it cleaned out, and on looking in some days later I was surprised to find quite half of it alive and sealed over. W. FISHER.

British Columbia, Canada, July 9.

Anticipated Swarming.

On page 428 is an item with the above title describing "anticipated swarming by single permutation." On page 419 the editor refers to the article, and questions whether it will not result in "double permutation."

I am aware that "one swallow does not make a summer," neither does one experiment establish a definite principle, but it may show at least what may be an exception to a general rule.

After reading the article referred to I followed the instructions carefully, and the result was even worse than the editor anticipated. Here is the method pursued:

June 17, "The queen and all the bees of hive No. 1 are driven out and put in a new hive on the old stand." Hive No. 1 is placed on stand No. 2. Hive No. 2 is put on a new stand. June 24, No. 1 and 2 exchange places.

Now for the result: The next day after shaking them (June 18), No. 3 left their hive and clustered with another large prime swarm that was in the air, but as the queens were clipped I caught them and divided the cluster, putting about one-half of them back in No. 3 where they remained all right. June 29, No. 1 swarmed. About July 10 (I failed to set down the date), No. 2 swarmed. So instead of getting one swarm from the two I got 3 swarms from them.

But this has been an exceptionally bad year around here for swarming. My first swarm was June 1, and they have kept it up almost incessantly until the present time. I had 2 swarms to-day. Perhaps in an ordinary year that method would be more successful. J. RIDLEY.

Wright Co., Minn., July 28.

Worst Year for Honey.

This is the worst year for honey I ever noticed; great bloom but no nectar. There has been much diseased brood in this section, but I have successfully cured every colony that I have "shaken." F. H. DRAKE.

Worcester Co., Mass., Aug. 8.

Treatment of Foul Brood.

Yesterday I saw foul brood for the first time. I was not aware that there was a case of it within 50 miles of my apiary. A friend had purchased a colony of bees some distance from his home, but they did not seem to be doing anything, so at his request I visited him. He is about 5 miles away.

A very offensive odor greeted me as I opened the hive. Many cells containing brood had sunk quite a little below the natural level, were brown in color, and were capped over. The capping was ropy, like mucilage, much of the brood was not sealed, and most of it was dead in the cells. I had all the combs cut out and put into water, with instructions to pour off the water after soaking a few hours, and bury it out of reach of the bees. I then ordered the comb boiled and the wax removed from the surface of the water upon collecting. The hive and frames which were filthy and not of very good quality, I ordered burned. I turned the bees into a new, clean hive with comb foundation starters 4 inches wide, with instructions to feed them until they went to work.

Upon returning home I changed all my clothing. I had used a screw-driver to pry loose the frames in the diseased colony. This I held in a blaze until the handle was scorched to a brown color. In addition to this I washed it in very strong soap-suds before taking it about my own apiary.

I may have been unnecessarily cautious about spreading this disease, but I cannot underrate the amount of harm that might have come to me as well as to my neighbors who keep bees.

Had the colony referred to been my own I should have taken it away at night, poured coal-oil all over and through the hive with bees fastened in, and burned up the entire disgusting mass.

I have not a particle of friendly feeling for bee-keepers who are careless with foul-broody colonies, or those people who tell the public through the press that bee-keepers make honey-comb, fill and cap it over, and that they mix glucose in large quantities with small quantities of honey, then label and sell it for pure honey. I feel confident that a great of this could be prevented if we were more watchful, and would impose a penalty for harboring disease among bees, and for the other corrupt methods named.

Dr. G. Bohrer.

Rice Co., Kans., July 26.

Swarming Experience—Short Crop.

I had this summer in the swarming line an experience which was entirely new to me. In two instances after a colony had swarmed and the young queen had begun to lay they swarmed again. I was present when one of the swarms issued, so I opened the hive and found one comb with a few eggs in it (200 or 300, may be), and 3 or 4 queen-cells with eggs in them. The second swarm came out at one of my out-yards and was hived by the owner of the land. I was there 3 days afterwards and opened the hive the swarm came out of, and found one comb half full of larvæ and eggs, and one half cell, that is not yet capped. That will answer the query in the editorial published July 21, on "Preparation for Swarming."

The honey crop in this section will be very short. White clover yielded very little honey. Alsike for the first time in my experience failed to give any crop, the bees hardly noticing it. Basswood is now in bloom, profusely so, but for the first week it failed, too; now the bees are at work on it, and have been for 5 days, but it is nearly over. Honey will surely command a good price.

Gustave Gross.

Vernon Co., Wis., July 22.

A Report from Nevada.

The outlook is bad from present weather indications, and I fear a shortage of the honey crop. It has been *average* up to date, and what we have secured has been first-class, mostly alfalfa. The second crop of alfalfa is late. As the weather has been hot it does not grow fast. I think the frost will catch the blossoms before they can be of much value to bee-keepers.

Churchill County has organized a bee-keepers' association.

John W. Lyell.

Washoe Co., Nev., Aug. 1.

Haps and Mishaps with Bees.

I want to tell you of my haps and mishaps among the bees since putting them out of the cave last spring. I took out the same number that I put in last fall—24 in all. I had to feed a few in the latter part of the winter. After taking them out of winter quarters I united 2 colonies with others, and 2 dwindled out. This latter circumstance very much surprised me, as the hives seemed to be quite heavy. But on examination I found that the most of the frames were chock-full of pollen.

A great many of the bees died during the winter, and this left the colonies pretty weak. I began to feed, and that started brood-rearing, as they began to build up. Up to July 15 the season was cold and wet, so much so that the bees were confined to the yard almost continually. Since that time they have piled up the honey.

I am in a splendid locality on the Des Moines River, where there are good nectar-blooming plants from early spring until early fall. We have no white clover in the pastures where the

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Daughters of Select Imported Italian, Select Long-Tongue (Moore's), and Select Golden, bred 3¼ miles apart, and mated to Select Drones. No impure bees within 3 miles, and but few within 5 miles. No disease; 31 years' experience. All mismated queens replaced free. Safe arrival guaranteed.

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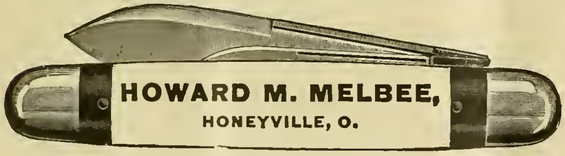

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How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

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stock keep it cropped down. Sweet clover, catnip, and other blooming plants are plentiful.

The last week in June and the first two weeks in July it seemed as if the bees thought they had nothing else to do but swarm. Since July 15 I have had no swarms. What a fine thing it would be to have a strain of non-swarming bees!

I have increased from 20 colonies to 32, putting all other swarms back. The colonies are now very strong, with from 2 to 4 supers on. Those with the 4 supers are chock-full and boiling over with bees. The wind was so strong that I was afraid they would blow over if tiered up any more, so I had to take off 21 sections and replace with empty ones. Those taken off were all well filled.

It is reported in this vicinity that bees were never known to be so cross. I know that in the four years that I have kept them I have never seen mine so cross.

My friends Blunk and Carver are making a good record with their bees, I believe. "Joe" has been harping to me about fish, and the best I could do for him was to give him a clipping about a catch that was made in some Wisconsin lake. It will please the eye, but won't build up brain and muscle.

I am looking for a good yield of honey in August; I hope we will get it, at any rate.
W. IRVINE, SR.

Webster Co., Iowa, July 30.

Treatment of Robber-Bees.

When I find that there is a case of robbing in my apiary I go to the besieged colonies and throw flour on the robbers as they pass in and out. In this way I can locate them at once. I then throw wet hay over the entrance to the hives of the robber colonies, thus preventing them from going in with their load. They will worry around until they are tired out, and they will never return to rob. When a man has trouble at home he is not likely to bother his neighbors. It would be advisable to close down the entrance to the hives of the besieged colonies to a small space, or see to it that the colonies have laying queens.

West Virginia. SUBSCRIBER.

Experiences of the Season.

I have had an experience this season which will cause old, experienced bee-keepers to smile, and doubtless some of them are willing to give me good advice and remedies for my so-called troubles.

I have said in previous articles that I was a small bee-keeper, and keep a few colonies partly for the pleasure of working among them, as the honey-bee and I are great friends, and it is very seldom that we have any misunderstanding.

In this section, last winter was a very hard one on bees, and the loss was great, mine being about 35 percent, which was a little below the average. I started in the spring with 15 colonies in fair condition. The spring was wet, late, and cold, and the nights have been cool up to the present time. My bees commenced to swarm June 12, and kept it up till July 23. I am hoping that they have done swarming for this year. I now have 44 colonies, and would have had many more had I not doubled all afterswarms. I have had 39 swarms from my 15 colonies in the spring, several of my first or prime swarms having cast swarms.

The above is my record on swarming this season up to the present time. If any one has a better record please let us hear from you through the American Bee Journal.

I will now give the honey record: I have taken off 165 pounds of section honey, and have a number of supers nearly full, which I will take off in a few days. Some of my colonies are storing honey in large quantities, while others that seem to be equally strong are not storing any surplus honey. I have a few old colonies that have cast three swarms each, and filled a super of 28 sections. I have one swarm that filled the hive and 28 sections in 22 days after issuing from the parent colony, and in 18 days after I took off the second super of 28 full sections, and the next day they swarmed. I have another swarm, or, rather, double swarm (for two prime swarms issued at the same time and clustered in one), and the next day after hiving

VIRGINIA QUEENS.

Italian Queens secured by a cross and years of careful selection from Red Clover Queens and Superior Stock obtained of W. Z. Hutchinson. I can furnish large, vigorous Untested Queens at 75 cents; after June 15, 60c. Tested Queens, $1.00; after June 15, 75c. Write for discount on large orders.

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Some Good Clubbing Offers.

A good many subscriptions to the American Bee Journal should be renewed at once. We wish to call special attention to the following, which we are sure will commend themselves to many of our readers:

No. 1—	The Bee Journal and Dr. Miller's "Forty Years Among the Bees" (book alone, $1.00)	Both for	$1.75
No. 2—	The Bee Journal a year and Prof. Cook's "Bee-Keeper's Guide," (book alone, $1.20)	"	2.00
No. 3—	The Bee Journal a year and Dadant's "Langstroth on the Honey-Bee," (book alone, $1.20)	"	2.00
No. 4—	The Bee Journal a year and Doolittle's "Scientific Queen-Rearing," (cloth bound) (book alone, $1.00)	"	1.75
No. 5—	The Bee Journal a year and Doolittle's "Scientific Queen-Rearing," (leatherette bound) (book alone, 75c)	"	1.50
No. 6—	Bee Journal a year and Standard Untested Italian Queen (Queen alone 75c)	"	1.50
No. 7—	The Bee Journal a year and a "Novelty Pocket-Knife" with your name and address on it (knife alone, $1.25)	"	2.00
No. 8—	The Bee Journal a year and a "Wood Binder," for holding a year's numbers (binder alone, 20c)	"	1.10
No. 9—	The Bee Journal a year and an "Emerson Binder," (stiff board) (binder alone, 60c)	"	1.40
No. 10—	The Bee Journal a year and a Monette "Queen-Clipping Device," (device alone, 25c)	"	1.10
No. 11—	The Bee Journal a year and Newman's "Bees and Honey," (cloth bound) (book alone, 75c)	"	1.50
No. 12—	The Bee Journal a year and Newman's "Bees and Honey," (paper bound)	"	1.10
No. 13—	The Bee Journal a year and Root's "A B C of Bee-Culture," (book alone, $1.20)	"	2.00
No. 14—	The Bee Journal a year and a Foster Stylographic Pen (Pen alone, $1.00)	"	1.75

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334 Dearborn Street, CHICAGO, ILL.

them I put on a double super, or 56 sections, and they filled the hive and both supers, and cast a swarm on the 23d day after being hived. A number of my best honey-gatherers are the doubled-up after-swarms.

Bees that swarm as mine have this season can't store as much honey as those that don't swarm, and some men will ask me why I don't work for extracted honey. To such I will give the following reasons why I don't make the change: I have always worked for section honey, and I have everything fitted up for that method of manipulating my apiary. I have passed the 80th milestone, and can not expect to work among the bees many more years, and the profits won't pay the cost of making the change. If I extracted I would have to ship my honey; now I have a substantial home market for all the section honey my bees can produce, and I get nearly double per pound what I would get for extracted, and, besides, the extracting method is not an infallible law; it does not always prevent swarming. There are other methods that will prevent swarming. One is to cut out queen-cells, but, as an old bee-keeper told me a few days ago, he did it for several years and had given it up, as it was a nasty, disagreeable job, and it must be done every week, and then the bees would often steal a march on him. I know it looks out of place for a man of my age to be up in a tree 20 feet from the ground to get a swarm of bees, but as I have not lost a swarm of bees in the swarming season for four years, and no accident has happened to me, I think I will plod along in the same old rut; but if I were younger I would do differently.

We have had an abundance of white and alsike clover this year, and it is covered with honey-bees. Basswood is now in full bloom, and it is like "the hum of the bees in the apple-tree bloom." Those who work for extracted honey report large yields.

S. B. Smith.

Millelacs Co., Minn., July 29.

CONVENTION NOTICES.

National at St. Louis.—The annual session of the National Bee-Keepers' Association for 1904 will be held in September, at St. Louis, Mo.

Sept. 27 and 28 will be devoted to Association work and its interests. We expect many prominent foreign bee-keepers to be present on these days.

Sept. 29, National Day.

Sept. 30, Inspectors' Day. Twenty bee-inspectors from all over the United States and Canada are counted on to introduce and discuss "The Diseases of Bees," etc.

Mr. N. E. France will exhibit, in the Convention Hall, a large map of the United States, Canada, Cuba and Europe. Each State and Country will have a shelf attached to the map with a one-pound sample of each kind of honey produced. Many other exhibits of special interest will be shown.

We expect to see the largest gathering of bee-keepers ever held in this country. A more detailed program will appear later.

Geo. W. Brodbeck, Sec.

Los Angeles, Calif.

Missouri.—The Missouri State Bee-Keepers' Association will meet Sept. 26, in St. Louis, in the same hall to be used by the National Bee-Keepers' Association. Further particulars later. Arrangements are being made for our accommodation by C. P. Dadant, in connection with the National Association.

Wakenda, Mo. W. T. Cary, Sec.

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WANTED—Comb Honey, Wholesale.—Will buy your crop outright, cash at your depot anywhere in the U. S., if price and quality are right. We have salesmen in nearly every market in U. S., but buy only through Thos. J. Stanley, Manzanola, Colo., our honey-man who spends the season in the West superintending our apiaries and looking after Western car-lots of honey. Address us there direct, stating what your honey is gathered from, what grade, the average weight of section, how packed, color, etc.; quantity, when you can deliver, and lowest cash price per pound properly crated and delivered to your depot. Would like to know about what the freight rate to your nearest city. We believe that our purchases are larger than any other firm or association. Yours for business, **THOS. C. STANLEY & SON,**
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HONEY AND BEESWAX

MARKET QUOTATIONS

Chicago, Aug. 8.—A little new comb honey is being offered at 12@12½c per pound for the No. 1 to fancy. Extracted, 6@7 cents per pound for white, and 5@6c for amber. Beeswax, 28c per pound. R. A. Burnett & Co.

Cincinnati, O., Aug. 8.—The stock of last year's comb honey is now nearly all cleaned up. The prices obtained were for fancy water-white, 12½@13½c; the new stock of same is now more plentifully offered; too early telling what the market might do in prices. For extracted is a fair demand, and I quote same as follows: Amber in barrels, 5¼@5½c; in cans, ½c higher; water-white alfalfa in cans, 6½c; fancy white clover in barrels, 6½@8c. Beeswax more plentiful, brings 28c. C. H. W. Weber.

Albany, N. Y., July 21.—We are approaching the demand for new crop honey. There have been no receipts thus far to speak of—not enough to establish as yet. We could sell a limited amount of light comb at 15@16c. Old crop is well cleared out of this market, and we look for a good trade in honey this season.

Extracted, demand light; some small lots arriving; holding at 7c for white, and 6c for dark. Beeswax quiet at 28@30c H. R. Wright.

Boston, July 8.—Our market on honey, both comb and extracted is practically in a slumbering condition, as there is really no call whatever.

Prices remain as before quoted, but are really only nominal. Blake, Scott & Lee.

New York, June 21.—Very little demand for comb honey. Some trade for No. 1 and fancy white, at from 12@13c, while dark and amber are almost unsalable. Extracted is in fair demand, although prices are irregular. We quote from 5@6½c, according to quality. Southern in barrels, at from 50@55c per gallon.

Beeswax more plentiful and prices are gradually declining. We quote 28@29c.

Hildreth & Segelken.

Cincinnati, July 15.—The supply of honey at the present time is limited, with but moderate demand. New honey is beginning to arrive. We quote our market to day as follows: Amber extracted in barrels and cans, 5¼@6½c; white clover, 6½@8c. Comb honey (demand limited), 13@14c for fancy and No. 1. Beeswax, 29c. The Fred W. Muth Co.

Kansas City, Aug. 8.—The receipts of comb honey are a little better and the demand is increasing. The market for the last month has been $2 75 a case for fancy white comb honey, but look for an advance in the near future. Extracted slow sale. Beeswax moving fairly well at 30c per pound. C. C. Clemons & Co.

Philadelphia, Aug. 10.—Some comb honey has been arriving in this market the last week, but hardly enough to fix the market price. Everything depends on the crop, which is still uncertain. Some few sales made of fancy comb at 16@17c; No. 1, 14@15c. Extracted honey arriving freely and selling at 7@8c for fancy white and 6@7c for light amber. Beeswax, 26c.

We are producers of honey and do not handle on commission. Wm. A. Selser.

San Francisco, Aug. 3.—White comb, 1-lb. sections, 12½@13c; amber, 9@11c. Extracted, white, 5½@6c; light amber, 5@5½c; amber, 4@4½c; dark amber, 3¼@3¾c. Beeswax, good to choice, light, 28@30c; dark, 26@27½c.

Spot stocks of amber grades are of fairly liberal volume, including some Hawaiian Island honey. The latter is rather dark, of light body and sugary flavor. It is receiving scarcely any attention. Choice water-white is not plentiful, either comb or extracted, and for this grade the market is moderately firm at the values prevailing.

$10,000 WE HAVE JUST COMPLETED OUR TEN THOUSAND DOLLAR BEE KEEPERS' SUPPLY MANUFACTURING PLANT
—and are ready to do business. Write us for leaflet showing our special Hives and prices. It is the greatest bargain you ever saw.
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This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only $1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.

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AMERICAN BEE JOURNAL

WEEKLY—$1.00 A YEAR.

Published by GEORGE W. YORK & CO., 334 Dearborn Street.

44th Year. CHICAGO, ILL., AUG. 25, 1904. No. 34.

WEEKLY

LOUIS H. SCHOLL,
Apiarist Texas Agricultural College, and Secretary-Treasurer Texas State Bee-Keepers' Association.

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If you are a producer of Extracted Honey, here is something worth investigating. It is now proved a success. Last year we sent out many bags as a trial. This year we find it hard to obtain bags enough to supply the demand. They are being used almost everywhere. If your honey candies soft it will candy harder in these bags. There is no loss as in the case of glass jars. They are not hard to fill. They bring the selling price of honey down where everybody can buy. Develop a home market. No package is as cheap and attractive as the **AIKIN HONEY-BAG.**

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We will print in name and address of producer or dealer, in different quantities, at the following schedule of prices for any size:

Lots of 100	$ .30
Lots of 250	.50
Lots of 500	.75
Lots of 1000	1.00

For each additional 1000 add 50 cents. Each change of name and address counts as a separate order. For instance, 1000 bags printed with four different names and addresses, 250 of each, would be $2.00; with 10 different names, $3.00, etc. As the bags must be printed before they are made up and coated, we can not change the label except in lots of 10,000 or over. We have some plain 2-lb. size of dark-drab paper which we can furnish plain at $2.00 per 1000 less than prices quoted above, or we can print a smaller special label in one color at above rates extra for printing.

We did not include these bags in our catalog this year because we wanted to see them more generally tested in different sections of the country, and proven a satisfactory package everywhere before doing so. We are prepared to supply them, and have arranged for a 1-lb. size in addition to the four other sizes sold heretofore. We are now supplied with all sizes.

1-LB. SIZE, 3½x5½.

100	$ .65
500	3.00
1000	5.50
5000 @	5.25

2-LB. SIZE, 5x7½.

100	$ .80
500	3.75
1000	7.00
5000 @	6.60

3½-LB. SIZE, 6x9½.

100	$1.00
500	4.75
1000	8.75
5000 @	8.25

5-LB. SIZE, 7x10.

100	$ 1.20
500	5.50
1000	10.50
5000 @	10.00

10-LB. SIZE, 10x10½.

100	$ 1.50
500	7.00
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AMERICAN BEE JOURNAL

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GEORGE W. YORK, Editor. CHICAGO, ILL., AUG. 25, 1904. Vol. XLIV—No. 34.

Editorial Comments

Revised Report of the 1904 Honey-Crop.

Gleanings in Bee-Culture, as in other years, has been endeavoring to get at the size of the honey crop for 1904 in the United States. It is an exceedingly difficult matter to get anything reliable about it, but they particularize the subject as follows, in the light of reports received so far:

> The yield in parts of Wisconsin, Minnesota and Michigan will be from one-fourth to one-half a crop; in Iowa, Illinois, Indiana, New York, Pennsylvania and Ohio, from the best information we can gather, the yield will be fair, but the aggregate amount of honey will not be as heavy as last year, owing to the aforesaid winter losses. Buckwheat in New York promises well. In the New England States, the yield has been light to fair.
>
> Reports are lacking from Colorado, but the few received indicate that the crop will not be as large as was anticipated; yield in Nevada will be good; in Utah will be largely a failure. We have not heard from Canada, but the prospects so far as we can gather are good.

Odd-Size Cases of Comb Honey.

C. C. Clemons & Co., one of the quoters of the honey market for the American Bee Journal, write us as follows on the variety of sizes of cases used for holding comb honey:

> AMERICAN BEE JOURNAL:—
>
> We note an increasing desire in bee-culture to put honey up in odd-size shipping-cases—15, 20, 24, 28 and 32 sections to the case. The price of honey for years has been based on 12 and 24 section-cases, and it is almost impossible to get any more for a 28-section case than you can for a 24 section. You have to open each case and show the buyer that there are 28 sections, and sometimes count them over two or three times to convince them that there are really 28 sections in the case.
>
> We think that this matter should be taken up with the bee-papers, and a 24-section case advocated in all localities, and the bee-papers, from our standpoint, can't impress this idea too strongly. We would be pleased to have an expression from you on this subject.
>
> Yours truly, C. C. CLEMONS & CO.

We are of the opinion that only two sizes of shipping-cases are ordinarily necessary. We refer to what have been known for years as the 12-pound and 24-pound cases. But, really, we do not see that the size of case has any special bearing when honey is sold by the pound. And we are just old-fashioned enough to believe that comb honey should be bought and sold by the pound instead of by the case. We think that most of our readers know our views on this matter. Come to think of it, we believe we have seen it stated somewhere that in a certain locality in the West, the bee-keepers declined to patronize the American Bee Journal any longer because we dared to express our honest opinion on this subject. But that action would not change the fact any, that it is better to buy and sell honey by the pound.

Still, we think it would be a good thing if there were more uniformity in the size of cases. And we believe that those commonly known as 12-pound and 24-pound would be all right, regardless of how many sections each holds.

We invite expression on this subject, both on the part of honey-dealers and honey-producers. We are quite sure the bee-keepers desire to use such cases as will give the most satisfaction to the dealers.

The Bee-Papers of the World.

How many bee-papers do you suppose there are in the world? The probability is that your guess will be somewhat under the mark. That unique publication, Trade Press List, gives a list of 87. France leads with 22. Next comes Germany with 11. Russia and the United States of America have 9 each. Little Belgium has 8; Bohemia, 6; Italy, 4; Algiers, Australia, Holland, Spain, 2 each; Canada, Denmark, Switzerland, Norway, Sweden, Roumania, 1 each. Most of them are monthly, 4 are semi-monthly, 4 bi-monthly. The only other weekly bee-paper in the world besides the American Bee Journal is the British Bee Journal.

So-Called "Manufactured Comb Honey."

There is likely to be some discussion on this subject at the St. Louis convention, and there is little doubt that the reporters will be on the watch for some warm stuff. Editor Root thinks it would be a good plan to offer $500 or $1000 to them if they can find two sections that are exactly alike in filling and capping. That would rouse their interest, surely.

Ordering Queens by Mail.

We find that there are a few bee-keepers who need a word of caution, or a few "don'ts," about ordering queens by mail.

When desiring to requeen, don't make the colony queenless before receiving the new queen. Wait until after the new queen has arrived.

Don't form a nucleus, to take a new queen, before the queen is received. It will be time enough after she comes.

These two "don'ts" are suggested by the fact that we have known bee-keepers to unqueen a colony, and also form a nucleus, *before* ordering the queens for them. This might be all right if one were certain that he would receive the needed queens within the next 48 hours. But even if queens are advertised, and sent, "by return mail," the mails may be delayed, or the advertiser may not in *every* instance be able to send the queens so promptly. At any rate, there is no necessity of the bee-keeper doing a thing before the queens ordered are on hand. It is not safe to take any other course, for if there should be much delay in getting the queens it might be almost impossible to introduce them successfully, and yet it would be no fault of the queen-breeder.

The Value of Pollen.

Take care of your combs of pollen. Sometimes a beginner is inclined to throw away a brood-comb because it is almost entirely filled with pollen. It is possible that there are places where such a comb is of no value, but in most places where a surplus of pollen is stored at one time, there will come other times when the bees will need it, and a pound of pollen may at times be worth more than a pound of honey.

Fertilizing Queens in Baby Nuclei.

"Swarthmore" has been claiming success in having queens fertilized with only a very few bees, and so have some others, as already reported. But some who have tried the same thing have made an utter failure. One of the veterans reports to us that he had not much faith in anything of the kind, but for the sake of knowing what the truth was gave the matter a somewhat extensive trial. He says he is obliged to confess that it is not a difficult thing to have young queens fertilized in a nucleus without any brood, merely a section of honey, and with only enough bees to cover well the section. He has had numbers of queens fertilized in this way, and the failures are little if any more than with nuclei of the usual type. But the young queens must be removed very soon after beginning to lay, or else confined with excluder zinc; otherwise they will turn up missing. No special apparatus was used, just a common hive, the bees being imprisoned a little more than two days before being allowed their freedom, a queen-cell being given at the time of imprisoning the bees, or else a virgin queen less than a day old.

Miscellaneous Items

"Some Facts About Honey and Bees."—This is the subject of an article by Mr. J. E. Johnson, on page 581. It was written to be published in leaflet form. We can furnish it in lots of 100 copies at 35 cents, postpaid. All orders should be sent to the office of the American Bee Journal.

Why not ask your local newspaper editor to republish it?

Absent Treatment for Rheumatism.—An innocent-looking German boy walked into a drug-store the other day, says the Cleveland Plain-Dealer, and, facing the proprietor, started in thus:

"Hav you got some bees' stings for rheumatisms?" he shyly inquired.

"Bees' stings for rheumatism?" the proprietor repeated. "Where did you hear of that?"

"Why, mother vas reating it by de newspapers," replied the lad.

The proprietor laughed.

"I've seen something of that kind in the papers," he said, "but I won't attempt to offer you anything just as good. Where is the rheumatism?"

"In de handt und in de arm," the boy replied.

"Well, see here," said the proprietor with a sudden smile, "I haven't got the cure on my shelves, but I keep it in my back yard. You go out through this door, and walk around my flower beds. When you see four or five bees resting on a flower, just try to pick them up."

The boy nodded and went out. He was gone at least 10 minutes.

When he came back his face was red, and his nose—where an angry bee had alighted—was beginning to swell. He held out his hand.

"I picked me some of dose bees oop," he placidly remarked.

"Did you?" said the amused proprietor. "And does your hand feel any better?"

The boy looked up.

"It ain't for me," he placidly replied, "it's for my bruder."

The Red Rose and the Honey-Bee.—Mr. H. Dupret, of Quebec, Canada, has forwarded the poem below, which was sent to him by Mr. John J. Keating, of Massachusetts, who says that it is a little song that his mother used to sing to him in his childhood days. It is as follows:

Pray excuse me,
And don't accuse me,"
Said the poor yeoman Bee
  To the queenly Red Rose,
"If I take a pot of honey
And don't lay down the money,
For indeed I haven't any,
  As all the wide world knows."
"Little Bee, do not worry
Nor be sorry,"
Said the queenly Red Rose
  To the poor yeoman Bee;
"For you pay me for my honey
Much better than with money,
In the sweet songs of summer
  Which you sing and sing to me."

Learning Bee-Keeping by Mail is the latest thing in the apiarian line. The A. I. Root Co. have just founded "The Root Correspondence School of Bee-Culture." The terms are $25, which includes, besides the "lessons," a colony of bees, a copy of "A B C of Bee-Culture," and a year's subscription to Gleanings. Their neat prospectus gives many reasons for establishing such a course of correspondence. Its progress will be watched with interest. Much can be learned "by mail" in these days, even in bee-keeping. A year's subscription to the American Bee Journal is an illustration.

Mr. J. O. Todd, one of our old subscribers in Washington County, Iowa, died recently, the cause of his death being heart trouble, from which he had been suffering for some weeks. Mr. Todd was an old settler of Washington County, and was one of the most respected citizens in the vicinity in which he lived. He was born in Delaware, in 1831. He had been a subscriber to the American Bee Journal since about 1875. His first colony of Italian bees were bought from Chas. Dadant, in 1876. Mr. Todd was a practical bee-keeper up to the time of his last illness.

Width of Top-Bars.—In the article by Mr. S. T. Pettit, on page 559, in referring to top-bars, he is made to say: "I am of the opinion that the time will come when the ⅜-inch thick by ⅞-inch wide," etc. The width should have been 1⅛, not ⅞. We regret the error, but are always glad to make correction when our attention is called to any mistakes that may have appeared in these columns.

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

Contributed Articles

Snow-white Comb Honey—Bait-Sections, Etc.

BY DR. C. C. MILLER.

IT is a pleasure to meet so kindly a foe as Mr. S. T. Pettit, so I have read with no little interest his article on page 518. I am there charged with "making a fad of snowy whiteness," and helping to create a demand for it.

Bless your heart, Mr. Pettit, I did not create the demand—the demand was already there, and all I have done has been to supply it and take my pay for that supply. You think I ought to educate the public that an article of well-ripened comb honey, even if darkened a little, is worth more than the same honey just as it is first sealed. I've done that; I've said it in print, and I've said it a good deal oftener verbally. But after I've said all I can on the subject, the public replies to me, "All you say may be very true; but we buy honey partly for looks; a snow-white section looks the best on the table, and we're willing to pay two cents a pound for the looks; if you don't care to sell us what we want, you're not obliged to."

For after all you have said, the fact remains, as I said on page 439, "To get the top of the market, sections must be snow-white." Now, if people want to buy looks, I don't see anything immoral in selling looks, do you? Isn't the whole comb-honey business largely a matter of looks? Don't you believe that extracted honey can be produced that will be just as good as the comb honey you and I are producing, and that such extracted honey can be sold for two cents a pound less than the comb? Shall you and I say, "Dear public, you must learn what is for your own good; extracted honey properly produced is just as good for you, and you must buy it; we will not be any longer a party to your extravagance, and we'll no longer furnish comb honey." I confess I don't feel any special call to say just that; do you?

POSITION OF BAIT-SECTIONS IN THE SUPER.

Instead of putting bait-sections in the center, you put them "next the super walls." So should I if I had enough of them. But I have only a limited number, and one bait in the center, I feel confident, will do more to start work in the super than eight next the super walls. If no bait is in the super the bees will begin work first in the center, and a center bait will be occupied sooner than a bait elsewhere.

I've no quarrel with you about your arrangement to give room at sides of supers; if mine were so arranged I wouldn't be at special pains to change; but I don't think I estimate as much congestion in my supers as you do. If a bee from the fields should go straight to the uppermost super to unload, the case would be different.

You speak of my practice of "putting new sections on top of sections instead of under them." Pardon me; that's not my practice; it's Hershiser's. He says add always on top; you say always under. I say always under; only when I don't know whether another is needed, but think it possibly may be, then I put an empty super on top as a sort of safety-valve—oftentimes a pretty good plan toward the close of the season, when one doesn't know what day the flow will cease. Such a super will not be touched by the bees unless they are actually crowded into it, and it can then be moved down to the lowest place. The little darkening done to the lower sections by the bees going up through will on the whole do less harm than the gluing and soiling of sections put below when such sections are not needed.

I wonder if decreasing the room in the hive during the honey-flow by removing sections does increase tendency to swarm. I suppose it must; but I'm after that extra 2 cents a pound, and will have to stand the extra tendency to swarm.

I just wish I could have a chance to fight a whole day with you in person—yes, and you might have that son of yours to help you—I met him in Chicago and rather fell in love with him. I think we'd find that after all we should agree on a good many things. McHenry Co., Ill.

Some Facts About Honey and Bees.

BY J. E. JOHNSON.

DID you ever give much thought to the subject of why the people of to-day are neither as strong nor as healthy as they were in former times? also why so many of the wealthiest men and women are invalids? and why our hospitals and sanitariums are forever crowded with patients, many of whom must undergo dangerous and painful operations, being brought under the influence of powerful anesthetics, such as chloroform, ether, etc., and are too frail to withstand the shock, and die?

It has been said that the world is growing weaker and wiser, but such should not be the case. If we grow wiser we should use our wisdom to retain health, as that is next in value to the salvation of our immortal soul.

There may be many causes for ill-health. Rich food, and the excessive use of sugar, candy, etc., are the principal agents that undermine our health. When papa goes to town he is reminded by the children not to forget to buy some candy; while at home they think there is nothing so good as cookies, cake, pie, and other nicknacks. And soon they become candidates for the doctor's attention.

A certain amount of sweet is necessary to promote health, but the excessive use of sugar is very injurious, especially to children, because it overtaxes their delicate digestive organs.

The best form of sweet for either old or young is honey, because honey is practically predigested, and is restful to the digestive organs. God created bees to store honey, and for several thousand years honey was the principal diet in the line of sweets, long before a sugar refinery was even thought of. Let us look into the history of honey.

In Genesis, 43d chapter, we find that the sons of Israel took honey with them when they went down into Egypt for corn.

In the 16th chapter of Exodus we find that the manna sent from Heaven to the children of Israel tasted like wafers made with honey. A food prepared by an All-wise Creator for his beloved children was certainly of the very best, and most wholesome.

In olden times bees lived largely in cliffs. Moses sang of honey; see Deuteronomy, 32d chapter, 13th verse.

Honey is also mentioned in the Psalms of David; see the 81st Psalm, 16th verse.

In the 13th verse of the 24th chapter of Proverbs we find these words from Solomon: "My son, eat thou honey because it is good."

In Isaiah, 7th chapter, 15th verse, we find these words: "Butter and honey shall he eat that he may know to refuse the evil and choose the good." In the 29th verse of the 14th chapter of I. Samuel we find that when Jonathan tasted of honey his eyes were enlightened so that Saul and his army were able to overcome the Philistines. And in many other places in the Bible is honey mentioned with favor, and as an emblem of purity and sweetness. In the last chapter of Luke we find that Christ, the Son of God, partook of honey before the disciples, just before ascending to Heaven. Bees must have been plentiful in those days, as they even took up their abode in the lion that Samson slew, and Samson was fond of honey; and judging by his great strength honey must have agreed with him.

The honey of to-day is just the same as it was in olden times, except that the bee-hive has been improved so that the bees build their combs in a more convenient shape.

A few years ago Prof. Frank Benton went to Palestine to investigate the bee-industry, and as a result of his efforts we have a particular strain of bees known as the Holy Land bees, which are now scattered widely over the United States. The bees always rear their brood at the bottom of the comb, and store their honey above, so that the nurse-bees carry their food down when feeding. So, by placing frames in the lower story of a hive, and sections or little boxes in the story above, the brood is reared below and the honey is stored above in the little boxes, and for that reason the comb honey on the market to-day is so white and nice, no brood having been reared in the comb. The comb in which brood is reared becomes much darker in color.

Foolish stories have been started by reporters who have no knowledge of the habits of honey-bees, that comb honey is made by machinery, but such reports are entirely without foundation. Comb honey can not be made artificially. A one thousand dollar standing reward has long been offered for a single pound of artificial comb honey. No one has been able to claim the reward.

In order to get the bees to build the combs straight and even in the little boxes, a small, thin sheet of beeswax is fastened in the center of the upper part of the box. The bees start their comb on this sheet, and thus the bee-keeper is able to get his bees to build comb in the shape desired.

The liquid honey found upon the market is obtained by shaving the cappings off of combs, and placing them in an extractor. The combs are made to revolve around inside of the extractor so that the honey is thrown from the comb by centrifugal force. The comb can then be placed back in the hive, and be refilled by the bees. More honey can be obtained in this way, as bees consume many pounds of honey in building comb.

The bees gather the nectar from different flowers and blossoms, and by a process known only to the bees and their Creator, the nectar is converted into honey—the most wholesome sweet known to man.

But let us look into this matter from a scientific point of view. Honey is often recommended and prescribed by the physician for colds, coughs, etc. It is also beneficial to patients afflicted with kidney trouble. Dr. Gandy, of Nebraska, says that honey is a sure preventive of that dreaded Bright's disease of the kidneys.

I have found honey to be a good remedy for tonsilitis, by holding honey in the throat so as to keep it in contact with the tonsil.

Of late, scientists have discovered that nearly all diseases are caused by living organisms which belong to the bacterium family. These organisms are so exceedingly small that they can only be seen by the aid of a powerful microscope, and when they find our system favorable to their propagation they take up their abode with us, and thus cause disease. These bacteria are not of animal life, but are little plants, and are often found in the water we drink, and the food we eat, and even in the air we breathe. For instance, the disease consumption is contagious, but only when these germs find our lungs weak or disordered.

Of late it has been found that the acids from raspberries, strawberries, lemons, etc., are very beneficial in preventing disease, because the acid, though not injurious to the system, does, to a great extent, prevent the propagation of disease-germs. Henri De Parville, a well known bacteriologist says in the Journal des Debats, that lemonade will kill the germs of typhoid fever. Citric acid will kill cholera-germs in two minutes. Now, while certain acids kill certain germs, formic acid is one of the best germ-destroyers known to medical science. And strange though it may seem, formic acid is always found in honey, and is one of the natural products of the honey-bee. So honey is not only a predigested sweet, as Nature has provided it should be, but it contains one of the best germ-destroyers known to medical science, and has stood the test of thousands of years. It was recommended in olden times. It was the food of the ancient prophets, and it is the same to-day as it was when God promised his chosen children of Israel a land that flowed with milk and honey.

In my own family we have honey on the table the same as butter, and the children eat all they wish, and do not have such craving for candy as they otherwise would have. We use it in summer in lemonade instead of sugar, and in winter we drink hot water sweetened with honey and flavored with lemon for colds; and I am sure we are much better and healthier for it.

Many say they would eat much more honey if they were sure that it was genuine bees' honey. Let me assure you that there is not, nor has there ever been, any such thing as artificial comb honey. Neither will the bees touch glucose nor store it in their hives. So that any one is safe and sure of getting genuine bees' honey when buying comb honey.

A few years ago liquid honey was largely adulterated by unprincipled dealers, but the pure food laws have driven it out of the market in most States. So ask for pure honey and don't buy syrup said to be as good as honey, and expect to get honey.

All honey does not look alike, nor taste exactly alike. For instance, clover honey is of light color, while when bees work on buckwheat and some other flowers the honey is of a darker color. I am a bee-keeper, and my bees not only furnish our family with honey, but I sell honey to my neighbors and near-by trade; but I have no honey to sell to far-off trade. Buy your honey of your grocer, or any near-by bee-keeper, and I assure you that you will find it far superior to any other sweet known.

Honey should never be stored in a cellar or damp room. If stored in a warm, dry room it will keep indefinitely.

Knox Co., Ill.

Convention Proceedings

Report of the Fourth Annual Meeting of the Texas State Bee-Keepers' Association, Held at College Station, Tex., July 5 to 8, 1904.

REPORTED BY LOUIS H. SCHOLL.

(Continued from page 567.)

"The Present Standing of Foul Brood in Texas" was gone over thoroughly by Louis H. Scholl. He has been in correspondence with bee-men in several of the infected localities where the disease is now prevailing, and he read several letters from these. From what he has been able to glean he gave the following paper:

FOUL BROOD IN TEXAS.

It is hard to tell just exactly what the present standing of foul brood is in this State, but I will relate the following:

The first notice that we received of the disease being in any of the Texas apiaries was from the north central part of the State. From Navarro county we learned that there were several apiaries where this disease had wiped out the bees, and that to the extent of several hundred colonies. In the several counties where the disease raged we may safely say that about 1200 colonies were destroyed by this disease. In some of these parts it seems as if it had now played itself out, as it were. After all of the bees were destroyed, and none left to keep the disease, it naturally disappeared.

In 1902, Mr. Wilmon Newell, then in charge of the apicultural work here, made a trip of inspection to Navarro county, and found several apiaries infected, which he instructed the owners thereof to treat, giving the most rigid instructions as to how the work should be carried out. He advised the burning of the badly infected colonies, and the treatment of the less infected ones. From recent letters I find, however, that the owners of these yards had not succeeded in ridding them of the disease.

As foul brood generally destroys apiaries in less time than it seemed to me it was doing in some of the districts in North Texas, I became a little doubtful as to whether it might be foul brood or perhaps some other disease. So I sent for samples of diseased brood, several of which I have here now. From examination of these it is hard to tell what it really is, but I do know that it is not foul brood. First, there is not the characteristic foul odor. Second, the ropiness of the dead brood is not present at all. Then, the dead brood does not sink down to the bottom of the cells as it does in foul brood. And if you examine the cappings over the dead brood you will not find them sunken and with a small hole in them. Instead, you see them sunken down about half way into the cell. Now it is hard to tell from such small samples that have been in the mails several days just what it is without perhaps a microscopical examination. So what is it that they have up there? I can not say what the present standing of foul brood is in that part of Texas.

Last fall we received many letters from the bee-men of Uvalde county wanting help. They were complaining about the spreading of the disease there, and that something must be done. As we have no funds for doing any of this work, and for defraying the expenses which would be involved in such work, we were, of course, unable to do anything. But after some correspondence it was agreed upon that I go out there and investigate the matter, and also to treat the diseased apiaries, provided the bee-keepers go together and promise to pay my expenses while there, in the way of board and lodging, buggy and horse, and that one man go with me to the infected apiaries.

I went there last year, in the fall, when broomweed was in bloom, and a honey-flow was on that would have made the work just ideal, but after spending two days there, during which time an attempt was made to get the bee-keepers together, I had to return to College without having accomplished anything. And this only because there were a few of the leading bee-keepers who led the others around as they wished, and who said that they did not think that it was necessary to have this expert come out here to attend to the foul brood; and then they thought that it was not so bad, anyway; therefore what is the use of spending any money for this work? Then a motion to adjourn was made by another, and they went home again.

I would like to say, however, that there were about 20 bee-men who really wanted the work done, but after the other fellows had their say, these did not have the courage to come out with it.

That is the trouble with too many of our bee-keepers, and unless they do wake up to the times and come out, ready to do something when an opportunity offers, they will never accomplish what should be accomplished.

Since then I have received letters from there to the effect that there were several yards infected very badly with the disease; that the owners of them were allowing combs and other things to be exposed to other and healthy apiaries, and that it would spread all over the country out there if something was not done soon. We have heard of one or two yards being fairly rotten with the stuff, that the owner had left them to themselves, and that other bees were exposed to them. But as I did not have occasion to go out to any of these yards, even after I traveled all the way to that place, I can not tell just what the present standing of foul brood is out in the Uvalde country.

Now I will take you down to the Beeville country, where this disease caused such an uproar last winter. I was called there, and now let me tell you something the very opposite from the previous narrative just gone over.

The Beeville bee-keepers went together and had a man come down there. When he came he was taken into their care and all the help was offered him that he would have needed, and that in spite of their being busy as could be. It was in the latter part of March, when bees need one's attention in that country, but these people were going to get rid of the foul brood first, and then attend to their bees, and they did it. I was enabled to destroy all of it that could be found, and we inspected something like 2000 colonies that were suspected. It took a good many days' work, but they did not let me go until it was attended to.

Out of the 2000 colonies inspected there were only 25 that were infected with the disease, and they were promptly burned.

In a lot of 8 hives in one of the yards the infection was traced back to a car of bees that was brought down from Dallas several years ago. The others were in a yard recently brought down from Iowa, and the disease was brought with the bees. At one place where a whole apiary had once been destroyed with foul brood were found 2 remaining colonies that were badly infected. These were placed on a pile of kindling made out of the old hives from which the bees had died before, after having dug out a large place in the ground to prevent any of the melted honey and wax from running out, and the whole thing was set on fire.

We have a foul-brood law, but it is not strong enough to accomplish the desired work. It is weak in some points, and mainly in that it does not give the inspector authority enough in treating the disease. For instance, in the case at Beeville, the burning of the bees could hardly have occurred had not the bee-keepers agreed in a meeting that they would stand behind the inspector and that the bees *be burned;* that the bee-men would settle any dispute that might arise therefrom.

Here is a case where the bee-keepers showed what could be done by uniting, and attending to things that needed their immediate attention. They had their meeting right in the infected yard, resolved to do their part, and they did it. If such action would be taken at all of the localities where the bee-men are troubled with this disease, it would not be long before it would be eradicated.

Besides, the Beeville bee-men have two strong associations in good working order. That is the main reason for their prompt action. "In union there is strength" holds good here. Each of these associations has a committee to look after the matter of the bee-diseases and foul brood. They call it a vigilance committee, and whenever it is thought necessary, inspections are made of apiaries that are suspected, and a report is made to the State Entomologist, who is authority in foul-brood matters. He then attends to the matter as deemed best.

It will be understood that we have no funds for doing this work, as has already been said. The Legislature left off the necessary appropriation, and there are no other funds to draw from for this work. Of course, the law provides that the costs be collected from the owner of the bees that were treated, but it takes a lot of money to pay for the expense involved in inspecting apiaries before any are treated. For instance, if we take the Beeville inspection trip, and consider it a minute; out of the 2000 colonies inspected there were only 25 that needed treatment. And these were in only two yards. Now, who is to be charged up with the expense of inspecting all the other apiaries that received no treatment? Yet these apiaries had to be inspected, as they were in the same locality, and were suspected.

I have simply mentioned this so that it might be clear to the bee-keepers of the State. The majority did not quite understand the situation, in that they overlooked this matter of the expense involved in the inspecting trips. I now hope that it will be understood by all why it is necessary to have an appropriation for carrying out this work. This appropriation we should work for, and it is the duty of the bee-keepers to see that we get it if we want to get rid of the dreaded foul brood.

I would like to say a few more words about the standing of foul brood at Beeville at the present time, as it is due the bee-keepers of that locality that I do so. As I said before, the disease was all destroyed when I was there, and since then the committees referred to have had the matter in hand to keep close watch over it. The last reports show that a stop was put to foul brood at the time of my inspection, in March, and that there is no danger of it appearing again unless brought there again from the outside. But even this is not very likely ever to be, as the vigilance committees will look carefully to all the bees that are brought there hereafter.

From the above you will be able to draw an idea as to the present standing of foul brood in our State. I will now leave it to the bee-keepers to act in the matter.

Louis H. Scholl.

Willie Atchley, of Bee county, the foul-brood inspector appointed by the South Texas Bee-Keepers' Association, was present and confirmed the statements of Mr. Scholl, saying that he had recently been out on an inspecting tour, but found no trace of more foul brood. He thinks that the country down there is now free of the disease, and that their committees would keep a close lookout for any that might appear. Any bees brought there will receive close inspection before being allowed to land. Thus, there will be little danger of any cases breaking out there again.

Mr. W. H. Laws, of the Nueces Valley Bee-Keepers' Association, also confirmed the above. He also said that the foul-brood law is too weak in some respects, and especially in that it did not give the bee-men authority enough when it was best to resort to burning the infected apiaries. He was one of the bee-keepers present when the Beeville foul-broody bees were burned, and stated that as the inspector had not the authority to burn these bees he, with the others, united, and insisted that they be burned, and that the bee-keepers would stand behind the inspector in case any trouble should arise. In this case the burning of the bees was the only way to get rid of the disease without infecting other yards which were near. Besides, the hives were old, full of propolis, and were in such condition that treating by any other method was impossible. Then, the bee-keepers and the committees referred to were too busy to attend to such work at that time, and there would have been nobody who could have attended to it.

Prof. Sanderson, the State Entomologist, in whose hands the foul-brood law was placed, gave the bee-keepers an address regarding it. He told them of the inefficiency of the law, and that there was no appropriation for doing the work. If no first-class law could be gotten we could not do anything with foul brood. Nothing can be done without a better law, and the necessary appropriation. Of course, the law is good in that it will help much as a stepping-stone in getting something better. He urged the bee-keepers to take this matter up in earnest, appoint a committee to look after it, and that the bee-keepers should pay for the work. This should be taken up at this meeting, as this was the proper time and place to attend to the matter. He also urged that the bee-keepers get up a sum of money from which to draw if expenses should arise. This committee should be at Austin during the meeting of the Legislature, and see to it that the matter is pushed along, and passed. The expenses should be paid by the bee-keepers. Legal advice might be necessary in framing a law of this kind. The persons for this work should be the best from among the members, and those who are well-fitted for carrying out what is to be done.

A motion was then made to appoint a committee of three to be known as a soliciting committee, and that they be instructed to get up subscriptions from the bee-keepers for defraying such expenses. These are F. L. Aten, C. E. Tribe, and Udo Toepperwein, to report later.

F. L. Aten, J. K. Hill, Dr. J. B. Treon, H. H. Hyde, and Prof. E. D. Sanderson, were appointed as the Legislative Committee of the Texas Bee-Keepers' Association.

(Continued next week.)

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Women as Bee-Keepers.

In one respect I think the average woman is a better bee-keeper than the average man. She is neater; she looks after the little things, keeps things picked up better. If she wants to find anything that is not in plain sight she does not stir up every thing in the shop to do it, or, if she does, things are not usually left just where they were dropped, making the shop look as if a cyclone had struck it. There are exceptions, of course, but the average man is a genius in this respect—I don't mean in respect to keeping things picked up, but in stirring things up.

"California Bees and Honey."

In that excellent paper, the National Stockman and Farmer, appears an article of some length, written by Mrs. Mary G. McKay, headed "California Bees and Honey." One is puzzled to decide whether it is written by one who got her knowledge by actual experience in handling the bees or by a professional writer, obtaining her knowledge at second hand. Likely the latter, in which case it is written with unusual accuracy, and in any case it is very readable.

"Sometimes the good wife," she says, "accustoming herself to the habits of the bees, with wise outlook, has added to her pin-money until her bank account has exceeded that of her husband."

A somewhat rosy picture is painted when she says:

"While beekeeping appeals to the leisure-loving and can be depended on as an easy way of making a living, yet to succeed in making the very best out of this industry there must be a thorough understanding of the insects, their ways of working, habits, etc. As an outdoor industry for semi-invalids it offers great inducements; as the manual labor required for months at a time is only to keep the grass and weeds cleared from about the hives to prevent ants, lizards and such enemies of the bee from finding a lurking place."

Even in California, something more than keeping down grass and lizards is required; work, and some of it hard work, must be done. But what is there worth the having that is not more worth while because obtained through hard work?

A wise word is spoken when she says; "A person undertaking bee-culture should prepare himself by a careful study of some treatise on the subject."

As to hiving swarms, we are told that the bee-keeper "lightly shakes the mass of insects near the opening of the new hive, where, finding a taste of fresh honey, they quietly enter." If Mrs. McKay would watch the hiving of a few swarms she would probably find that all the taste of fresh honey, or honey of any kind, that they get upon entering their new abode, is what they carry with them from the old hive.

Regarding the production of honey in the two different forms, comb and extracted, we are told:

"While many beekeepers make a business of extracting their honey my neighbor tells me that in this section more money is made by selling in the comb, as the cost of extractors and the work required in extracting are all saved; but in the case of large colonies in the South extracted honey forms the most marketable product."

"The cost of extractors and the work required in extracting are all saved," which sounds just a little as if the cost and the labor were less in the production of comb honey. If, "in the case of large colonies in the South extracted honey forms the most marketable product," does that mean that the market for comb honey is not so good as that for extracted? And if extracted honey forms the most marketable product, "in the case of large colonies," does that mean that comb honey is better in the case of small colonies? But perhaps she means large apiaries instead of large colonies.

But, as already said, the article is unusually free from error to be written by one not herself a bee-keeper.

A Complexion Lotion.

For a complexion lotion, to soften the skin, wash the face two or three times a week with the following preparation: Glycerin, 5 ounces; lanolin, 5 ounces; clarified honey, 5 ounces; rosewater, 1 ounce; elderflower water, 1 ounce.

Put the glycerin, lanolin and honey in a double boiler. When they are well mixed add the rosewater and elderflower water. Shake well and bottle. When applying to the face use a linen pad or soft cloth.—From Chicago Record-Herald.

Honey and Pecan Sandwiches.

Sarah Windle Landes gives the following recipe for sandwiches, in The Delineator:

Four tablespoonfuls extracted honey, two tablespoonfuls finely chopped pecans. Mix the two ingredients. Split soda biscuits, hot or cold, butter them and fill with the mixture. The biscuit should be baked not over half an inch thick.

See Our Queen Offer for sending one new subscriber to the American Bee Journal. Page 589.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

BOILING FOUL-BROODY HONEY.

Reading N. E. France's directions for boiling foul-broody honey, I felt that a needed caution was left out. Liable to be glutinous and thick, such honey is not like water, easy to get it all boiling hot. Easy to get 97 per cent of it boiling hot, but the other 3 per cent gets on the kettle above water-line, and on the cover, and puffs up into the form of foam, and escapes a long manipulation without being at 212 deg. at all. This won't do. Such honey must be *all* subjected to the killing heat, else never any of it used for feed. Suppose the seeds of a new and specially bad weed were intrusted to you to kill, and you chose to kill them by boiling in water, and you let 3 per cent of them escape in protective scum, and on cool metal plates, and eventually dumped the whole in the barnyard to be scattered in the fields! Page 493.

A COMFORTABLE WORK-TABLE.

Instead of ¾-inch stuff for a table have your table of 3-inch stuff—and not nearly so high as ordinary tables, well-made, solid, heavy and low. That's just it, Mr. S. E. Miller. Thanks. Ever so much easier to make things on such a table than on an ordinary one—to say nothing about harvest-spidering around on the ground. Page 494.

MANY THINGS REQUIRED IN SUCCESS.

Yes, one point left wrong can easily make the butter poor, but never superior butter without a multitude of things attended to. A similar law affects a great many things and vocations in the world, apiculture included. And still we manage to think that everything is going to boom, once we get that *one new notion* into effect. Page 495.

NO PREPARATION FOR SWARMING.

I can't name hive and date, but I think my bees have sometimes swarmed without the usual preparation when they had not been manipulated for many days previous—only crowded conditions, and very hot day, and took a notion from the swarm spirit abroad in the air. This in reply to editorial question about the matter on page 499.

SWARMING AND AFTERSWARMING.

To the brother who wants it written down rulable for a swarm to emerge one week from the day they have made a failure of swarming and returned to the hive, I will tell how it stands in my memory: In just about *one-half* such cases they will next make a trial a week or more afterward. In something like one-half the cases the next trial will be the next day. I suppose this mainly depends on whether the queen is all right, and in the hive next day or not. If not, they'll wait till a young one comes out, *or gets somewhere near ready to come out*. Afterswarms have nothing to wait for that they should wait a week; and mostly they try again next day. But for them to omit one day is not rare. A second trial the same day is also common—and there may be three trials the same day. One of the rare—but not so very rare—happenings in a big apiary is for a swarm to emerge and return one or more times each day for quite a number of days in succession. I'm not at all sure about the rationale of this, but off-hand I guess it to be somewhat as follows: A colony in a high state of swarm excitement swarms and enters the hive of another colony which is not intending to swarm, at least not soon. Both queens get balled and killed, making successful swarming impossible. It's a long time to wait for a young queen, and the excitables find it a relief to their feelings to try the swarming flurry occasionally—and gradually get the more quiet home-bees into the same way of feeling. *Usually* an intruding swarm preserves its queen, and comes out the next day without the bees intruded upon going with it in any great numbers—and that ends the matter. Presumably the two crowds spend the night making faces at each other.

Going back into the hive is quite common among afterswarms. One would expect (their queens being much better on the wing) that is would be rare. Not ready to prove anything about it, but suspect two cases among them also, perhaps three. In the first case the young queen is abnormally rattle-headed, and after flying around a little while—sometimes a long while—she goes home. The bees are left to follow when their patience fails—often after remaining in cluster quite a long spell—occasionally will even submit to be hived and stay a few minutes. In the second and still more abnormal case they swarm when no queen at all has emerged yet—greatly excited in their minds, and want to try if they can't expedite matters by a swarm rush. Very possibly when there is a queen present with the swarm the bees and not she are sometimes responsible for a return. This would make a third case. Page 499.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Drone-Laying Queen.

1. I have a colony of bees hived June 23 which I am confident was the first swarm from the parent hive this season, and I supposed, of course, that the old queen was with them, but to my surprise I have found that all the brood and brood-combs are drone. Can you explain the cause?

2. Can I kill this drone-laying queen and unite the workers with another weak colony? If so, how? Or, will there be danger of the bees balling the fertile queen of the other colony? ILLINOIS.

ANSWERS.—1. It is quite often the case that when a queen becomes old the contents of her spermatheca are exhausted, and she then lays drone-eggs in worker-cells; but the change is usually gradual, just a few drones at first, becoming more and more until all are drones.

2. Yes, you can unite in different ways. One way is to kill the bad queen, and two or three days later give a frame with adhering bees to the weak colony, and another frame each day after. But when you have given enough so the weak colony becomes as strong as the other, you need not hesitate to give all the rest at one time.

◆

Supposed Mating of Clipped Queen.

I see you say that it is a physical impossibility for a queen to mate that is clipped. My father-in-law, an honest Christian man, had a case just like that. About June 12 a first swarm came from a colony (he saw it cast the swarm). In due time he saw a second swarm issue from the same hive. The queen would not stay in, so he cut off both wings. I told him later that he had fixed her. But today I examined the condition of the colony, and found a clipped queen laying splendidly. The hive was three-fourths full of worker-comb, with brood in all stages from eggs to hatching bees. To say I was surprised puts it mildly. There was an alighting board two or three feet square in front of the hive which had been there since they were put in. I can vouch for these facts. He had cut off three-quarters of the wings. MISSOURI.

ANSWER.—I have had several cases of the same kind, excepting that there was no clipped virgin in the case. July 27, this year, I took the queen from No. 111 and put her in a colony fifteen numbers farther on in the row. Eight days later I found plenty of eggs and young brood in No. 111, and was surprised to find a clipped queen present. The likelihood is that a neighboring colony swarmed, and its queen entered No. 111. Is it not possible that the same thing occurred in your case?

◆

Late Brood-Rearing—Bees of Swarm Killed.

1. I notice that late brood-rearing is recommended. How would you encourage it?

2. I have a swarm that issued on June 8, which did fairly well. But on the morning of August 4 I found about half a pint of dead bees on the ground and on the alighting-board. Why did they kill them? PENNSYLVANIA.

ANSWERS.—1. With a fall flow of even moderate extent there is no need to do anything to keep up late brood-rearing. Young queens, however, are more reliable than old ones. If the flow stops early, breeding can be kept up by light feeding every other night.

2. It is quite possible that a puny afterswarm from somewhere else tried to enter, and the bees were killed.

◆

Clipping Queens to Lay in Queen-Cells—Excluders Under Section Supers.

On page 535 Mr. Thomas Broderick says that to clip a queen will induce her to lay in queen-cells, and I wish you would give me some light on this subject, as I am clipping a number of my queens, though I never found that this induced them to lay in queen-cells. Are not a great number of the bee-keepers recommending clipping all queens?

2. Do you think that a queen-excluder will do much in preventing the storing of honey in sections? If so, to what extent?

3. Would you advise taking the chances of having some sections filled with brood rather than to use a queen-excluder? TEXAS.

ANSWERS.—1. I have been clipping all my queens for years and never supposed it made any difference about their laying in queen-cells. I don't see why it should. Perhaps Mr. Broderick will enlighten us on this point.

2. Of course it hinders free passage at least a little, and to that extent is a hindrance to storing; but that hindrance might not amount to one pound in a thousand. Yet it may amount to more.

3. With separators and sections filled with foundation there seems no need for excluders. At least I don't find brood in one section in a thousand.

◆

Perhaps Excited—Uniting Colonies—Shaken Swarm.

1. I had a pint of bees and a queen in a hive. The queen was a virgin, and when she took her wedding-flight the bees swarmed out with her and lit on a cedar-tree near by. Why did they do this?

2. I returned the swarm and gave them about a pint more bees and some brood. Two days later the queen left the hive and returned fertilized. Of this I am sure. Two days later the queen and two-thirds of the bees were gone. Where did they go? Is it possible that they went into some neighboring hive?

3. What is the best method of uniting?
4. What is a shaken swarm? MAINE.

ANSWERS.—1. I don't know; perhaps from mere excitement. It is not at all an uncommon thing.

2. Quite likely; although it is impossible to say.

3. Hard to say. One good way is to make one of the

colonies queenless two or three days before uniting, then put the frames of brood and bees together alternately. Another is to put one hive on top of the other (one of them being queenless) with a sheet of manila paper or two or three thicknesses of newspaper between the two stories, having in the paper a hole large enough for the passage of a single bee at a time.

4. Shake or brush all or nearly all the bees from the combs of a colony, leaving in the hive the bees, queen and frames of empty comb or foundation, and removing the brood to some other place—possibly leaving one frame of brood for two or three days—and you'll have a shaken swarm.

Clover and Trees for Bees—Wintering in an Observatory Hive—Wiring Frames—Requeening.

1. What kind of clover can common bees work on?

2. What kind of trees, other than fruit-trees, can bees work on?

3. Is there anything I can plant that will furnish honey in July and August?

4. Will a queen winter all right in an observatory hive with one frame of bees, if kept in a warm place?

5. Do you put wire or strips in brood-frames if you use only foundation starters, or only when using full sheets of foundation?

6. Will a 3⅝ x 1¾ section hold one pound of honey if filled with plain separators in the super?

7. Would you requeen a colony of bees if they did not do as well as the others, when the queen is very large and pretty? VIRGINIA.

ANSWERS.—1. White, alsike, crimson, white sweet clover, yellow sweet clover, sometimes red clover, and perhaps others.

2. Oh my! A whole lot; more than I can tell, and more than I know. A few are linden, locust, poplar, eucalyptus, maple, banana, black mangrove, etc.

3. Try sweet clover, buckwheat, and perhaps phacelia.

4. Possibly, but you will not be likely to have much left in spring.

5. Only with full sheets.

6. Somewhere in that neighborhood, but there's nothing exact about the amount that can be counted on in that or any other section. One colony may put more weight in a section than another; the same colony may make sections heavier one year than another, and even in the same super there may be a decided difference in weight.

7. Yes, handsome is that handsome does.

Sign of Queenlessness—Making Nuclei—Dividing Colonies.

1. Do bees sometimes swarm out, cluster, and on being hived stay and go to work, and yet have no queen? I have one that I hived July 20, which seems to be that way. I examined the colony August 2, and no queen could be found. I found some comb and honey, but no eggs or larvæ.

2. They carry very light loads of pollen. Is this a sign of queenlessness?

3. How late will it do to make nuclei?

4. Can bees be divided without sealed queen-cells?

5. Does a queen in a cell have her head up or down? I saw one in a cell that was not quite out. She looked as though her head was up.

6. What part of the hive is called the super?

7. Where can I get "A B C of Bee Culture?" NEBRASKA.

ANSWERS.—1. When the queen does not go with the swarm the swarm returns to its old home or unites with some other colony, although sometimes a swarm that has staid hived is found queenless afterward; possibly the queen was lost after being hived.

2. It is to some extent a sign of queenlessness, although not always reliable.

3. You probably mean to have the nuclei built up into colonies for winter. It depends upon the pasturage, the strength of the nuclei, and the help you give them. Generally it is not safe to make a 2-frame nucleus later than the middle of July, if you expect it to have no further help, although one may be started in September if you give it enough help from other colonies.

4. Yes.

5. The usual way is head down; rarely on her side; never head up unless you put her so.

6. The upper part, in which the surplus honey is stored. "Super" is a Latin word which means "over."

7. You probably mean Doolittle's excellent work on queen-rearing, which can be had at the office of the American Bee Journal for $1.00, or with the Journal a year, both for $1.75. The book, "A B C of Bee Culture" is mailed for $1.20; or with the American Bee Journal a year—both for $2.00.

Bees Loafing—Perhaps No Forage.

I have a very strong colony of bees in a large box-hive. They have been loafing for three weeks or more. Are they likely to swarm? They cast one very good swarm in the early part of June, but were very weak in the spring. This same colony cast a swarm on August 24 last year, which was the largest swarm of bees I ever saw. It almost filled two Danzenbaker brood-chambers. This left the old colony weak to go into winter quarters. It was a swarm itself in May of last year. The swarm wintered with some fall feeding. MARYLAND.

ANSWER.—That depends. If they have been loafing as long as three weeks, and there is plenty of room in the hive, perhaps there is nothing for them to do in the fields. If other bees are busy gathering, they may be thinking of swarming, although three weeks is a pretty long think.

Preparation for Swarming—Virgin Queen Perhaps Starved.

1. One of my colonies contained a valuable queen, which I got last year. I went to it a short time ago to get a frame of eggs for a queenless colony, and found nine sealed queen-cells and one young queen. The old queen was gone, and there were no eggs or larvæ. (They had swarmed about three weeks before, and at that time I cut out all cells and returned them with their clipped queen, and found a few eggs in the hive a week later.) I got the queen as a premium from a firm that I consider *perfectly* reliable. Were they superseding their queen? If so, why?

2. Did they kill her as soon as the queen-cells were started?

3. I caged the young queen, and as fast as I cut out the cells the young queens cut themselves out and I caged seven more. I had several two-story hives with supers above (I ran for comb honey), and I smoked and drove the bees down into the lower hive till I felt pretty certain the queen was below. Then I put the lower hive on a new stand, leaving the other on the old stand, and put a caged queen in each for them to take care of two or three days, when I intended to make sure the old queen was not there, before letting the young one out. While examining them today I found one young queen dead, and the other one nearly so. Did they let them starve? If so, why? I was under the impression they would take care of a virgin for a long time, whether they had a laying queen in the hive or not. IOWA.

ANSWERS.—1. Hardly superseding; rather swarming. You thwarted them in their attempt to swarm, and they at once began fresh preparation to swarm again.

2. Probably not till the young queen emerged; although the old queen may have been viewed with some disfavor as a continuance of the swarming fever.

3. A very young virgin is hardly considered as a queen by the bees, and would in many cases be allowed to starve. A laying queen would be more likely to be fed than a virgin, even in a queenless colony. You should have provisioned the cage.

FROM MANY FIELDS

Good Season for Honey.

This has been a very good season for this part of the country. I have taken off some beautiful comb honey. I have not extracted any yet, but some of my colonies have three full-depth extracting supers on. I expect to begin extracting about the middle of the month. I sell my comb honey to the stores at 12½ cents a section. There are not bees enough in this part of the State to have any effect on the price of honey. HANS CHRISTENSEN.

Skagit Co., Wash., Aug. 6.

Crop a Complete Failure.

We are having a famine here among the bees. The honey crop is a complete failure. I have not taken a single pound this year. I have been feeding my bees for some time. If fall honey fails the bees will not live through the winter. G. D. HAWK.

Sullivan Co., Tenn., Aug. 11.

The "Bidsom" Feeder.

I have recently made five "Boughter—Improved—Danzenbaker—Super—Original—Miller Feeders," which, I think, are just the thing for top feeding; but as that name is too big, I simply use the initial letter of each word, and call it briefly the "B-i-d-s-o-m Feeder," thus giving proper credit to each party whose ideas I have borrowed. It is a combination of the "original Miller feeder" idea, with the Danzenbaker super principle of supporting it over the brood-nest. The regular Danzenbaker super, without frames or fences, is the outer wall of the feeder, and is separate and distinct from the feeder itself. The "original Miller feeder" is made to fit snugly into the super, hanging by Danzenbaker rivets on the regulation supporting cleats of the super; allowing space between the inside of the super and the outside of the feeder for the bees to get to the feed.

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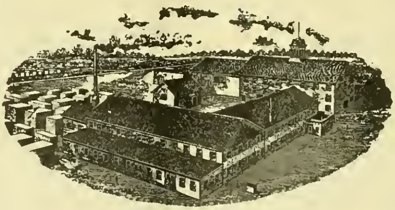

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Before nailing, take the end-pieces, and at the top edge on each side, cut out a rabbet ¼x½ inch, to receive the "top side-pieces;" also drive the rivets 2 inches from the sides, and 3⅝ inches from the bottom of each end-piece, letting the head into the wood (like a screw-head) far enough so that the outer end of the rivet will project at least ¼ of an inch to rest on the end cleat of the super. Nail the ends, sides and bottoms together; you now have a box 14x17, outside measure, 5½ deep at the ends, and 5 deep at the sides. This box must be thoroughly paraffined on the inside, so as to make it perfectly water-tight. The "2 inner-side and top-side pieces" are now nailed together, and fastened into the rabbets prepared to receive them, which will then allow ⅛ of an inch at the bottom of the inner side-pieces for the feed to pass from the body of the feeder into the side chambers for the bees to reach it. Hang this box into the Danzenbaker super, and fill it with

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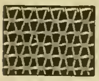

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sugar-water; and you have a *sine qua non* "Bidsom feeder," in which the bees can get at the feed, but not at you while looking after their feeding.

And this home-made "Bisdom feeder" makes humble bow to the bee-keeping public, while making its "bids" for bee-keepers' favor everywhere. JAMES GRANT BOUGHTER.

Carbon Co., Pa.

Very Dry Summer.

It has been very dry here this summer, so there will not be much surplus honey this year. Most of the bees were killed off last winter. IRA L. HYDE.

Washtenaw Co., Mich., Aug. 14.

Too Cold for Fruit-Bloom.

I have been keeping bees three years, and have 14 colonies. It was so cold last spring that we lost the fruit-bloom. The bees are doing very well now. I am 58 years old, and like to work with bees.

I have been taking the American Bee Journal ever since a year ago last May, and have every copy since then.

M. M. BUCKANAN.

Jackson Co., N. C., Aug. 5.

A Good Queen—Introducing.

I wish to give a report of an Italian premium queen that I received from the American Bee Journal office three summers ago. She was successfully introduced in a colony of fierce hybrids, where she did some fine work and wintered well. The following spring (1903) I had the colony transferred to a Danzenbaker hive. The bees were beautifully marked, very gentle, and such fine workers that I used her for my breeding queen. Although I was continually robbing her of brood, her colony stored more honey than any other in the yard. During the summer a terrible epidemic of foul brood swept through here, and her colony was one of the four in my yard that did not get the disease. I have stamped the disease out of my yard.

This spring the bees were very weak on account of dysentery, caused by long confinement during the winter. I packed her up good and warm, and she was bringing her colony up nicely when the first swarm came out, on June 6. I caged my breeder, filled her hive with drawn comb, and turned the swarm into the hive. I then introduced my caged queen into the hive where the swarm came out. She has now a powerful colony of bees that are doing extra-good work at storing honey.

The daughters of my breeder are very fine workers.

Here is a short cut for introducing queens instantaneously. I believe it surpasses Dr. C. C. Miller's drowning method:

Open the hive, remove the old queen, catch hold of the new one and daub her all over with honey, and drop her in between two frames of brood so that she can not fall to the bottom, and the work is done. I have used this method for some time, and have never lost a queen.

If I have an extra-choice queen, and feel like being more careful, if there is not a good honey-flow on, I drive the bees back a little with smoke, then sprinkle them with sugar-water (diluted

TENNESSEE QUEENS

Daughters of Select Imported Italian, Select Long-Tongue (Moore's), and Select Golden, bred 3¼ miles apart, and mated to Select Drones. No impure bees within 3 miles, and but few within 5 miles. No disease; 31 years' experience. All mismated queens replaced free. Safe arrival guaranteed.

	Price before July 1st.			After July 1st.		
	1	6	12	1	6	12
Untested	$ .75	$4.00	$7.50	$ .60	$3.25	$ 6.00
Select	1.00	5.00	9.00	.75	4.25	8.00
Tested	1.50	8 00	15.00	1.25	6.50	12.00
Select Tested	2.00	10.00	18.00	1.50	8 00	15.00
Select Breeders						$3.00 each

Send for Circular.

JOHN M. DAVIS, Spring Hill, Tenn.

VIRGINIA QUEENS.

Italian Queens secured by a cross and years of careful selection from Red Clover Queens and Superior Stock obtained of W. Z. Hutchinson. I can furnish large, vigorous Untested Queens at 75 cents; after June 15, 60c. Tested Queens, $1.00; after June 15, 75c. Write for discount on large orders.

CHAS. KOEPPEN,
22Atf FREDERICKSBURG, VA.

LICE SAP LIFE

That's how they live and thrive. You can't have healthy, profitable fowls or stock and have lice too. Let

Lambert's Death to Lice

take care of the vermin and you will be more busy taking care of the profits. Makes sitting hens comfortable. Sample 10 cents; 100 oz., $1.00 by express. "Pocket Book Pointers" free.

D. J. Lambert, Box 707, Apponaug, R. I.

DEATH TO LICE.

Take Notice That the New Century Queen-Rearing Co. will have 1000 Queens ready for the mail by April 20. Tested, $1.00; Untested, 75c; 5 for $3.25; 10 for $6.00. Prices on larger quantities and Nuclei given on application. "Prompt service; fair treatment" is our motto.

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BEES AND NUCLEI.

Choice home-bred and Select Imported Stock. All Queens reared in full colonies.

One Untested Queen	$. 65
" Tested Queen	.90
" Selected "	1.10
" Breeder "	1.65
" Comb Nucleus (no Queen)	1.00

All grades ready now. Safe arrival guaranteed.

For prices on quantities and description of each grade of Queens, send for free Price-List.

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35 Colonies Bees in Langstroth Hives. Address,

ROBT. J. COLBURN,
34A1t 6827 UNION AVE., CHICAGO, ILL.

honey is as good) till they are entirely subdued, then daub the queen and drop her in. Please try this, Dr. Miller, and report.

The theory of the instantaneous introduction is this: Daubing the queen with honey removes all foreign scent. The bees may take her for an intruder, but when they pitch on her perhaps to ball her, they get into the honey and begin at once to clean her up. May be it arouses their sympathy, *if they have any*, and by the time she is slicked up all signs of hostility cease.

FRANKLIN G. FOX.

Bucks Co., Pa., July 29.

CONVENTION NOTICES.

National at St. Louis.—The annual session of the National Bee-Keepers' Association for 1904 will be held in September, at St. Louis, Mo.

Sept. 27 and 28 will be devoted to Association work and its interests. We expect many prominent foreign bee keepers to be present on these days.

Sept. 29, National Day.

Sept. 30, Inspectors' Day. Twenty bee-inspectors from all over the United States and Canada are counted on to introduce and discuss "The Diseases of Bees," etc.

Mr. N. E. France will exhibit, in the Convention Hall, a large map of the United States, Canada, Cuba and Europe. Each State and Country will have a shelf attached to the map with a one-pound sample of each kind of honey produced. Many other exhibits of special interest will be shown.

We expect to see the largest gathering of bee-keepers ever held in this country. A more detailed program will appear later.

GEO. W. BRODBECK, Sec.

Los Angeles, Calif.

Missouri.—The Missouri State Bee-Keepers' Association will meet Sept. 26, in St. Louis, in the same hall to be used by the National Bee-Keepers' Association. Further particulars later. Arrangements are being made for our accommodation by C. P. Dadant, in connection with the National Association.

Wakenda, Mo. W. T. CARY, Sec.

Wanted.—The Western Illinois Bee-Keepers' Association will meet in the Court House at Galesburg, Ill., Tuesday, Sept. 20. All who are interested in bees are cordially invited to attend. The convention will begin at 9 o'clock a.m., and last all day. E. D. WOODS, Sec.

J. E. JOHNSON, Pres.

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Comb and Extracted
HONEY
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Boston pays good prices for a fancy article.
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WANTED
Fancy Comb Honey from White Clover,
in no-drip cases, at once. State your lowest price for SPOT CASH, the average weight of honey per comb, all definite and final in first letter. We answer mail and pay for goods promptly. Plenty of references if desired.
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RETAIL AND WHOLESALE,
Has an established reputation, because made by a process that produces the **Cleanest and Purest, Richest in Color and Odor, Most Transparent and Toughest**—in fact, the best and most beautiful Foundation made. If you have never seen it, don't fail to send for samples. Working wax into Foundation for Cash a specialty. Beeswax always wanted at highest price. A full line of **SUPPLIES**, retail and wholesale. Catalog and prices with samples free on application.
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WANTED--HONEY
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Mail sample and state price expected delivered Cincinnati.
Queens Now Ready to Supply by Return Mail
Golden Italians, Red Clovers, Carniolans,
Price for Untested:
One, 75 cents. Six, $4.00. Twelve, $7.50.
SAFE ARRIVAL GUARANTEED.
C. H. W. WEBER,
Office and Salesrooms—2146-48 Central Ave.
Warehouses—Freeman and Central Aves.
CINCINNATI, OHIO.

HONEY AND BEESWAX
MARKET QUOTATIONS

CHICAGO, Aug. 18.—Some new honey is on sale; No. 1 to fancy white comb brings 12@13c; so far the demand is of a slow nature. Extracted, good supply, and white grades sell at 6@7c; amber, 5@6c, according to kind, quality, flavor and package. Beeswax, 28c.

R. A. BURNETT & CO.

CINCINNATI, O., Aug. 19.—The tone of the comb honey of this year's stock is becoming stiffer, producers claiming it to be not so plentiful and therefore ask higher prices. I quote fancy white comb honey from 15@15½c.

Extracted is showing no change. Amber, in barrels, 5¼@5½c; in cans, ½c higher; water-white alfalfa in cans, 6½c; fancy white clover, in barrels, 6½@8c. Beeswax more plentiful, brings 28c per pound. C. H. W. WEBER.

ALBANY, N. Y., July 21.—We are approaching the demand for new crop honey. There have been no receipts thus far to speak of—not enough to establish as yet. We could sell a limited amount of light comb at 15@16c. Old crop is well cleared out of this market, and we look for a good trade in honey this season.

Extracted, demand light; some small lots arriving; holding at 7c for white, and 6c for dark.

Beeswax quiet at 28@30c H. R. WRIGHT.

BOSTON, July 8.—Our market on honey, both comb and extracted is practically in a slumbering condition, as there is really no call whatever.

Prices remain as before quoted, but are really only nominal. BLAKE, SCOTT & LEE.

CINCINNATI, July 15.—The supply of honey at the present time is limited, with but moderate demand. New honey is beginning to arrive. We quote our market to-day as follows: Amber extracted in barrels and cans, 5¼@6½c; white clover, 6½@8c. Comb honey (demand limited), 13@14c for fancy and No. 1. Beeswax, 29c. THE FRED W. MUTH CO.

KANSAS CITY, Aug. 11.—The supply of honey is increasing. The demand is improving. The market here to-day is $2.75, but we look for it to go higher next month on account of the short crop of honey this season in this section. Extracted slow, 5½@6½c. Beeswax good demand, 30c. C. C. CLEMONS & CO.

PHILADELPHIA, Aug. 10.—Some comb honey has been arriving in this market the last week, but hardly enough to fix the market price. Everything depends on the crop, which is still uncertain. Some few sales made of fancy comb at 16@17c; No. 1, 14@15c. Extracted honey arriving freely and selling at 7@8c for fancy white and 6@7c for light amber. Beeswax, 26c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

SAN FRANCISCO, Aug. 10.—White comb, 1-lb. sections, 12½@13c; amber, 9@11c. Extracted, white, 5½@6c; light amber, 5@5½c; amber, 4@4½c; dark amber, 3¼@3¾c. Beeswax, good to choice, light, 28@30c; dark, 26@27½c.

Market is quiet, and for other than choice to select is not favorable to the selling interest. There is not much water-white honey offering, but considerable of amber grades, and scarcely any inquiry for ordinary qualities.

HONEY AND BEESWAX
When consigning, buying or selling, consult
R. A. BURNETT & CO.,
199 SOUTH WATER ST. CHICAGO. ILL.
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WANTED — COMB HONEY, WHOLESALE.—Will buy your crop outright, cash at your depot anywhere in the U. S., if price and quality are right. We have salesmen in nearly every market in U. S., but buy only through Thos. J. Stanley, Manzanola, Colo., our honeyman who spends the season in the West superintending our apiaries and looking after Western car-lots of honey. Address us there direct. stating what your honey is gathered from, what grade, the average weight of section, how packed, color, etc.; quantity, when you can deliver, and lowest cash price per pound properly crated and delivered to your depot. Would like to know about what the freight rate to your nearest city. We believe that our purchases are larger than any other firm or association. Yours for business, THOS. C. STANLEY & SON,
29Atf MANZANOLA, Otero Co., COLO.
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JAMESTOWN, N. Y.

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Apiaries—Glen Cove, L.I. Catalog free.

ST. LOUIS, 1904.

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A No. 1 Smoker by mail, $1.

Bees, Honey and Beeswax bought and sold for cash.

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1 ALTA SITA, EAST ST. LOUIS, ILL.

Goods in Season.

Honey-Packages of all kinds for marketing and shipping Honey. Fancy "no-drip" Shipping-Cases with glass in front and paper trays for holding-drip; square flint-glass **Honey-Jars** with patent spring-top fasteners and glass stoppers; regular **Mason Fruit-Jars** nicely packed for shipping; **Tin Buckets**, all sizes; 5-gallon **Tin Cans** boxed 2 Cans in each box. EVERYTHING THE BEST.

Standard-Bred Queens

and everything necessary in the way of Supplies of all kinds for bee-keepers. DISCOUNT ON GOODS FOR NEXT YEAR'S USE.

C. M. SCOTT & CO.
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I ARISE

To say to the readers of the BEE JOURNAL that

DOOLITTLE...

has concluded to sell **QUEENS** in their season during 1904, at the following prices:

1 Untested Queen	$1.00
3 Untested Queens	2.25
1 Tested Queen	1.25
3 Tested Queens	3.00
1 select tested queen	1.50
3 " " Queens	4.00
Select Tested Queen, last year's rearing,	2.50
Extra selected breeding, the very best	5.00

Circular free, giving particulars regarding each class of Queens, conditions, etc. Address,

G. M. DOOLITTLE,
24Etf Borodino, Onondaga Co., N. Y.

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27th Year **Dadant's Foundation** 27th Year

We Guarantee Satisfaction. What more can anybody do? BEAUTY. PURITY. FIRMNESS. No SAGGING. No LOSS. PATENT WEED-PROCESS SHEETING.

Why does it sell so well? Because it has always given better satisfaction than any other. Because in 26 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies
OF ALL KINDS.

Langstroth on the Honey-Bee—Revised
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

DADANT & SON, Hamilton, Hancock Co., Ill.

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WHERE YOU BUY YOUR
BEEWARE
WATERTOWN, LEWIS U.S.A.
MAKES THE FINEST

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National Bee-Keepers' Convention, St. Louis—Sept. 27-30

AMERICAN BEE JOURNAL

WEEKLY—$1.00 A YEAR.
Published by GEORGE W. YORK & CO., 334 Dearborn Street.

44th Year. CHICAGO, ILL., SEPT. 1, 1904. No. 35.

WEEKLY

QUEEN-REARING APIARY OF H. G. QUIRIN, OF HURON CO., OHIO.

THE AIKIN HONEY-BAG

If you are a producer of Extracted Honey, here is something worth investigating. It is now proved a success. Last year we sent out many bags as a trial. This year we find it hard to obtain bags enough to supply the demand. They are being used almost everywhere. If your honey candies soft it will candy harder in these bags. There is no loss as in the case of glass jars. They are not hard to fill. They bring the selling price of honey down where everybody can buy. Develop a home market. No package is as cheap and attractive as the **AIKIN HONEY-BAG.**

Attractive but Cheap.

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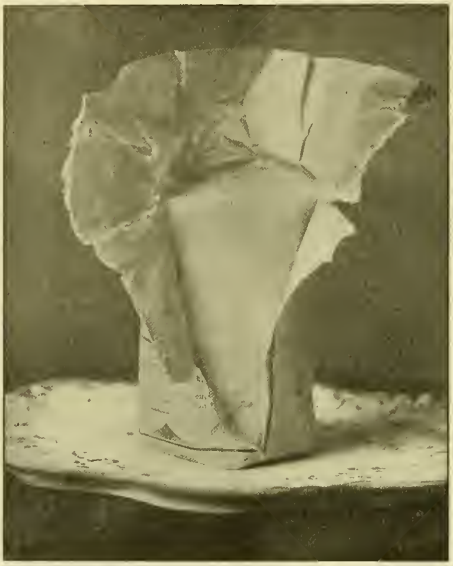
Brings Trade and holds it.



EASY to fill ....

* *

EASY to handle...

We will print in name and address of producer or dealer, in different quantities, at the following schedule of prices for any size:

Lots of 100	$ .30
Lots of 250	.50
Lots of 500	.75
Lots of 1000	1.00

For each additional 1000 add 50 cents. Each change of name and address counts as a separate order. For instance, 1000 bags printed with four different names and addresses, 250 of each, would be $2.00; with 10 different names, $3.00, etc. As the bags must be printed before they are made up and coated, we can not change the label except in lots of 10,000 or over. We have some plain 2-lb. size of dark-drab paper which we can furnish plain at $2.00 per 1000 less than prices quoted above, or we can print a smaller special label in one color at above rates extra for printing.

We did not include these bags in our catalog this year because we wanted to see them more generally tested in different sections of the country, and proven a satisfactory package everywhere before doing so. We are prepared to supply them, and have arranged for a 1-lb. size in addition to the four other sizes sold heretofore. We are now supplied with all sizes.

1-LB. SIZE, 3½x5½.	
100	$ .65
500	3.00
1000	5.50
5000 @	5.25

2-LB. SIZE, 5x7½.	
100	$ .80
500	3.75
1000	7.00
5000 @	6.60

3½-LB. SIZE, 6x9½.	
100	$1.00
500	4.75
1000	8.75
5000 @	8.25

5-LB. SIZE, 7x10.	
100	$ 1.20
500	5.50
1000	10.50
5000 @	10.00

10-LB. SIZE, 10x10½.	
100	$ 1.50
500	7.00
1000	13.50
5000 @	13.00

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AND MANY AGENTS.

AMERICAN BEE JOURNAL

ESTABLISHT IN 1861

THE OLDEST BEE-PAPER IN AMERICA

Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor. CHICAGO, ILL., SEPT. 1, 1904. Vol. XLIV—No. 35.

Editorial Comments

Foul-Brood Legislation in England.

This seems to be the leading topic in the British Bee Journal at the present time. In this country there is scarcely a dissenting voice among bee-keepers themselves as to the desirability of strict foul-brood laws; the only trouble is to get the legislatures to wake up enough to act. But in England bee-keepers themselves are very much divided, those who have had no experience with the disease thinking that it can be fought by individual effort. To this a writer in the British Bee Journal pertinently replies:

> Of what use is care, cleanliness, new blood, strong colonies, special treatment, when your skep neighbor over the hedge has a hotbed and hatchery of the disease capable of contaminating a whole countryside, so that your strong colonies are decimated in spite of your persistent and painstaking efforts?

Showing perhaps better than anything else the divided opinion in that country is a circular sent out to the various county associations by the Council of the British Bee-Keepers' Association asking to be told:

1. If your Association is, or is not, in favor of legislation?
2. Will your County Council support, or put in force, an Act, if obtained?
3. Is your Association prepared to contribute toward the cost of securing a Bill, and if so, what sum?

The preliminary cost of getting an Act through parliament, if indeed action can be secured at all, is estimated at from $750 to $2500.

All of which should give a very comfortable feeling to the bee-keepers in those States which, with so much less trouble and expense, have secured efficient laws on this important matter. Let the good work not flag, however; so long as there is a single State in the Union without an efficient foul-brood law, that State is a menace to every other State.

Get the Sections Finished Up.

When working for section honey it is desirable to have a few unfinished sections left over as baits for the next season, but usually there are more of such baits than are desired. The outer sections, and especially the corner ones, are the last to be finished, and it is the practice of some to take off a super without waiting for these laggards. Then the unfinished sections are massed in a super and returned to the bees to be finished, such supers of sections being dubbed "go-backs" by Dr. Miller. He claims that good work is done in getting these "go-backs" finished, the supers of them not being distinguishable from other supers of sections except by the word "gob" (short for "go-back") penciled on one of the central sections.

S. T. Pettit thinks there is no need for uneven work, using perforated followers at each side of the super, thus getting the outside sections finished as soon as the others.

Building Cells Upon Capped Cells.

Every bee-keeper knows that a honey-comb has two sets of cells, one on each side of the septum, and some have noticed that occasionally there is a third set. If a comb of honey is sealed over, and then moved so that there is any considerable space more than a quarter of an inch between it and the opposing surface, the bees may commence building another set of cells right upon the sealed surface. It is well to know that every drop of honey contained in the cells thus covered over by the extra set of cells is a dead loss, and might just as well be so much wood. The bees seem to think that when they come to the bottom of these surface cells they have reached the septum, and there is no use to try to go farther; and they may starve with at least a little honey easily in reach. So when you find comb built over cappings, be sure to dig down through the cappings, if it be only to punch a small hole into each cell.

Rate of Bees' Flight.

D. M. M., one of the leading correspondents of the British Bee Journal, thinks that bees, when going out without a load, may go as fast as 30 miles an hour, or a mile in two minutes; but returning they may take anywhere from 5 to 10 minutes for a mile. He says:

> I have what I consider fairly reliable proof that they can travel 30 miles an hour, but I can adduce no evidence to prove it. While I believe that they *can* do so, however, I am quite confident that they rarely do. My belief is that, though in making for the foraging grounds, they easily travel a mile in three minutes, yet on their return they frequently take double that time; and I know, on occasions, they may take ten minutes. I have watched them hundreds of times approaching home heavily laden, and I know that for a considerable distance I have paced them at the above speed. In watching them leaving or returning to their hives, I made elaborate observations for given distances, and these bore me out in these conclusions.

Looking for Queen-Cells.

With not a few bee-keepers, especially of those who work for comb honey, one of the chief labors of the honey season is looking for queen-cells. It is no small help to know where to look for cells. No need to look in the center of a comb evenly filled with brood for cells prepared for swarming. On the edge of a comb is the usual place, a new comb being preferred to older ones. But if there is a jog or a hole in the central part of one of the central combs, that's the place the bees will be sure to start cells if they start any. They may start a number in other parts of the hive as well, but if none are started there, no need to look elsewhere. George Demuth, in Gleanings in Bee-Culture, gives the following plan to lessen the labor of searching for cells:

"Place a comb in the center of the brood-nest, said comb having an opening in its center formed by means of two pieces, ⅞x⅛x6, spaced ⅜ or ½ inch apart by being tacked to blocks of that thickness. This little frame is inserted in the comb horizontally, and the top-bar of the frame is painted red, or otherwise marked. On opening a hive, draw out this comb. If no cells appear in this opening, there are none in this hive. All other combs must be perfect (not contain openings), and it is better if they are built solid to the bottom-bar by having been inverted."

The Dadants and French Bee-Keeping.

C. P. Dadant has been secured as one of the chief contributors of l'Apiculteur, the oldest and most thoroughly established of the 22 bee-journals of France. To those who know something of the history of French bee-keeping during the last half of the nineteenth century, that is a wonderfully significant statement.

Thirty-five years ago the elder Dadant began to advocate advanced methods of bee-keeping in the French journals, and met with severe opposition. M. Hamet, at that time editor of l'Apiculteur, was especially bitter in his opposition, maintaining the use of skeps, or box-hives, in preference to movable-frame hives. Mr. Dadant, however, from his home in Illinois, sturdily kept up the fight all through the years, and to him is mainly due the advance in French bee-keeping to-day. The giving of the place of honor to the son by the same journal, which was his father's bitterest foe, is a graceful acknowledgment of the great debt owed to that father by all the French bee-keepers.

Miscellaneous Items

Mr. T. F. Bingham, of Clare Co., Mich., wrote as follows, Aug. 17:

"We have a small early crop of finest honey. Bees are getting a little from buckwheat, etc., now, but not much. The weather is cool, dry, and windy—no honey in the air."

Mr. C. H. Hare, of Pawnee Co., Nebr., gave us a short call last week. He reports a good honey crop in his part of the country, and also a good bee-supply trade. It seems that at least in some parts of the country the bees have done well. We are inclined to think that there will be a fair crop of honey generally.

Mr. J. L. Strong, of Page Co., Iowa, on Aug. 26, sent us a clipping, which is in substance as follows:

Harry Strong and Roscoe Flowers were out on a hunting and fishing excursion, when one of the saddest accidents it has been our duty to chronicle occurred. When they reached the river near the Thomas Whitehall farm, Roscoe got out of the spring wagon in which they were riding, and had gotten the boat which they were going to use, when he heard the report of a shotgun. Harry had started to drive over the bridge which crosses the river at that place, holding a small single-barreled shotgun between his legs, when a jolt of the wagon jarred the trigger, sending a charge of shot into his left arm and shoulder. Harry was taken to Mr. Whitehall's home, to which a physician was immediately summoned, and the boy's father was sent for. Everything possible was done to save Harry's life, but he lived less than 24 hours after the accident, and was laid to rest on the evening of Aug. 25. Harry was 17 years old, and the son of Mr. J. L. Strong.

Mr. Strong, the father of Harry, is one of our queen-advertisers. If there has been any delay in filling orders, his customers who read the American Bee Journal will now know the cause. All will join us in extending sympathy to the bereaved parents of Harry Strong.

Wisconsin and Minnesota Bee-Keepers to St. Louis.—Mr. L. F. Hanegan, of Glenwood, Wis., writes as follows about taking a carload of bee-keepers to the St. Louis convention this month:

I am planning to get together a car of bee-keepers to go to the St. Louis convention, to leave St. Paul the morning of Sept. 26, via Chicago. If we get 20 members we get a car direct to World's Fair gates from here without change. Car-fare for the round-trip is $13.00; no sleeper. Sleeper can be had Chicago to St. Louis for $2.00. Already 12 are planning to go with coach party. I intend to spend some time at the Minnesota State Fair in talking up this trip and the National Association. Any one can join this car at any point on the Wisconsin Central Railway or at Chicago.

L. F. Hanegan.

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

Some Expert Opinion

"In the multitude of counsellors there is safety."—Bible.

Collective Name for Queen-Bee and Her Progeny.

13.—*(a) Is it desirable in modern bee-literature, to adopt a fixed nomenclature or name for the mother (queen) bee and her progeny, when domiciled in the hive?*

(b) What word, words, or name, should be in common use when speaking of the mother (queen) bee and her progeny or attaches, when located in a hive?

G. M. Doolittle (N. Y.)—b. Colony.

P. H. Elwood (N. Y.)—a. Yes. b. Colony.

Mrs. J. M. Null (Mo.)—a. Yes. b. Colony.

Eugene Secor (Iowa)—a. Yes. b. Colony.

C. H. Dibbern (Ill.)—a. I think not. b. A colony.

C. Davenport (Minn.)—a. Possibly. b. I hardly know.

N. E. France (Wis.)—The average bee-keeper does not care for it.

J. M. Hambaugh (Nev.)—a. I don't know. b. I don't know.

L. Stachelhausen (Tex.)—I am not competent to answer these questions.

C. P. Dadant (Ill.)—The names "queen" and "colony" seem to answer sufficiently.

S. T. Pettit (Ont.)—a. Yes. b. Before swarming, "a stock;" after swarming, "a first swarm."

Prof. A. J. Cook (Calif.)—a. Yes. b. Queen, as distinct from virgin queen. This is a long custom, and is O. K.

Adrian Getaz (Tenn.)—a. Yes. b. I don't know. Normal colony. Queen-family. Bee-family, or something like that might do.

Dr. C. C. Miller (Ill.)—a. Well—er—yes, as nearly fixed as possible. b. "Colony" is a word that generally answers the purpose; sometimes "swarm," and sometimes "nucleus."

Jas. A. Stone (Ill.)—a. I had never thought of such a need. b. I know of no word more suitable than the one now in use—"colony."

O. O. Poppleton (Fla.)—I don't believe that I understand these questions. The word "colony" covers what is asked for, but it also includes more, viz.: combs and hive.

R. C. Aikin (Colo.)—I use the term "colony." 'Tis probably not strictly correct, but I know of no better, and it is common usage so to describe or name. Guess better keep on so.

James A. Green (Colo.)—a. There would be some advantage in having a definite name. b. Until something better is brought forward, I think the present term "colony" should be used.

E. S. Lovesy (Utah)—a and b. I don't think so. The main thing to do, as I take it, is to keep track of the age of the queen and her working capacity, then you know how to operate under almost any condition.

Dr. J. P. H. Brown (Ga.)—a. It is very desirable. b. *Mother-bee* would be much better than the word "queen," which does not express anything functional or characteristic of the insect. The names that are now applied to the other inmates of the hive are sufficiently expressive.

R. L. Taylor (Mich.)—a. Certainly, if I comprehend the question, but not an exclusive one; but is there not one already adopted? b. The word "colony," to be modified by an appropriate adjective to indicate any defect or excellence as "a queenless colony;" while nucleus is a convenient word for a very small colony.

E. Whitcomb (Nebr.)—a. I never could see any use in such a procedure. Animals have more or less intelligence and learn to know their names; insects never do. If in order to identify them, I would use numbers instead of names as the least liable to confusion. b. I would number them from one up, of each family, which would render them easy of identification.

Rev. M. Mahin (Ind.)—a. There ought to be uniformity, so that all would understand just what is meant. b. If we were starting anew some other name might be better than "queen" for the mother-bee, but I doubt whether any other name can be substituted for it without too much trouble and confusion. As for the progeny of the queen, etc., when located in a hive, "colony" seems to me as good a name as we can find.

G. W. Demaree (Ky.)—a. To make our bee-literature comprehensible to the reading public, I answer yes. b. Well, now, you suggest a problem, a real head-swimmer! The mother honey-bee, and her brood or family, if she could read our ancient and modern bee-literature—well, she would surely "scratch her head" in wonderment to know who she and her family was, and is, and "where she was, and is at." The unfortunate royal old mother, with her single family, is called by the learned moderns a "colony!"—that is an indefinite number of families, and while quietly and peaceably at work in her domestic hive-home—she is called a "swarm"—commotion in the air or on the earth; and sometimes she is called a "shook swarm," and a "shaken swarm," or a "brushed swarm," and all this while the poor old slandered mother with her family is quietly domiciled in her hive-home. When the writer was a young man—50 years ago—the old men of those days called the old mother "king," and her brood, a "gum of bees," and they were nearer right than are our hifalutin, educated shookers, and shakers, and swarmists, and colonizers Well, I believe the mother honey-bee with her brood would be satisfied with the name of "hive-hold of bees."

Contributed Articles

Alfalfa for Honey—Second Mating.

BY PROF. A. J. COOK.

Few of us appreciate the remarkable productiveness of alfalfa, and its importance as a forage plant, or its promise as an aid to the bee-keeper. I just saw in the paper that three carloads of bees had been shipped the past week from California to Nevada. This means that, confronted with a honey-dearth in California, the bee-keepers had cast about, and noting the unoccupied alfalfa-fields of Nevada, they had bethought themselves to hie thither with their bees in hopes to secure a crop despite the California drouth. One of these bee-keepers was no less a personage than our old-time friend from Illinois, J. M. Hambaugh.

I have wondered much of late if we are utilizing the alfalfa pasturage to the limit in our own State. We know that in this part of our State if the rainfall is scant, or is untimely in its fall and distribution, we are sure to be confronted with a honey famine. We also know that where alfalfa is grown, there the flowers and nectar-secretion are independent of rainfall, as this plant is grown in many sections entirely by irrigation, and so is as little disturbed by peculiarity of season as any honey crop known to man. I think that the honey product in the great San Joaquin Valley is very sure, and that comes largely from this source. In many parts of Southern California there are fine alfalfa fields that are unused by apiarists. Who knows but what if these were utilized the bee-keepers could get a good honey product without the great expense of moving bees by the expensive way of the railroads?

It is worth while to study into this marvelous plant somewhat, as it is of such importance to our bee-keepers. In some respects it is unique among all plants. In the first place it roots very deeply. I have actually seen its roots reaching down 10 feet, and have heard of them stretching down for 20 feet in search of water and other food. It is plain to be seen that in this wide reach they come in touch with a vast deal of fertility, and use, or may use, abundance of water, if it is to be had at all. In California the soil is rich, fertile, and productive away down, often for many feet. Dig a well or any pit, or grade off the top soil and we often grow as fine a crop on this lower soil newly exposed as we grow on the topmost soil. Thus ours is the soil for alfalfa. If we can only get the water alfalfa will do wonders in our region.

And what a crop alfalfa is! Think of growing, in extreme cases, 10 crops in a single season! Six or seven crops in a season is the average in case of a good stand in a good section. Often two tons per acre per cutting are secured. Thus it would be possible, I suppose, to secure, in a single season, 20 tons of hay per acre of this excellent hay. Is there any other crop that any one knows of that reaches anywhere near this great accomplishment?

Of course this means an immense amount of water. It takes an inch of water to an acre to grow alfalfa. While an inch to 10 acres is often as much as the orchard can claim, and as much as it can get. We see, then, in regions where water is very valuable it is tremendously expensive to grow this crop. Few know or realize the amount of water that it takes to produce one pound of dry matter. It averages 325 pounds, and in case of alfalfa reaches more than 400. This is the water that the plant pumps up from the earth and passes off through the foliage. In this way a maximum crop of alfalfa uses over 400 tons of water per acre. This is the equivalent of a six-inch rainfall. Think, then, what happens when from 6 to 10 crops are grown in a single season! Verily, alfalfa has been rightly called a real water-toper. This makes it evident that alfalfa may be discarded as too expensive a crop where "water is king," as it is in all the region of Southern California. In locating, then, the bee-keeper who is to rely upon alfalfa for his forage, must see to it that there is an abundance of water. I doubt if alfalfa will continue as a crop in any section where water has to be pumped. In case the water comes too near the surface so that this wonderful crop will grow without irrigation, or in case there are great irrigation ditches, or, again, if there are never-failing artesian wells, then we may hope for continuous fields of alfalfa, and may safely locate our bees in that region.

There is another point that the bee-keeper should understand. Alfalfa will not do well unless the roots reach down many feet. Thus, if there is a calcarious hard-pan—as is very likely to occur in arid regions like Colorado, Nevada, Arizona, and California—within two or three feet of the surface, then it will never answer for growing alfalfa. There must be a deep, pervious soil in any region that is to make a success of alfalfa.

One other point is worth attention. The alfalfa is often cut before the bloom is out long. In this region the best growers cut the first crop of the season before it blossoms at all; else the plants get too coarse and the hay is second quality. It must be fine and leafy, especially to give the best results in the dairy. After the first cutting, it is usual to leave it till it is about one-third through the blossoming season. Thus, of course, the honey season is cut short some by this early cutting. There will, however, be much of this bloom at all times in regions of extensive alfalfa culture.

Los Angeles Co., Calif.

Description of the "Centennial" Hive.

BY J. L. STRONG.

BY request I will try to write a description of the large hive, as seen in the view of my apiary, on page 449. For a name I call it the "Centennial." It is 13 inches deep by 17¾ long inside, and 17 inches wide. The width can be varied to suit the fancy of the apiarist. The comb frames rests in a rabbet similar to the Langstroth frame, but no bee-space above; this is provided for in the section-case and slatted honey-board.

The top piece of the frame is 1 7-16 inches wide, with insets or scallops to admit the bees to the sections; it has a gain or slot cut in each end. The center one rests on wooden pins in the rabbet, to prevent it from sliding, when the division-boards are pressed against the frames.

The board that separates the sections from the brood-chamber is made of strips 5-16 inch thick, cleated on the inside to preserve the bee-space, and is pressed against the frames as we enlarge or contract the brood-chamber. This division-board is perforated to admit the bees to the sections on either side.

The rear board is ½ inch thick, perforated to admit the bees to the sections. This board is nailed permanently, with an extension of 4¼ inches to receive sections.

The hive is provided with three movable sides that can be lifted out, to see the glazed sections as they are being filled.

The cap is simply a box rabbeted on the lower edge to shut over the hive. This hive was designed for a non-swarming hive, and is as near that as any hive I have ever seen. Side-storing is not popular with bee-keepers generally, but I find bees working freely in side sections when the colony is strong and other conditions are favorable; and when the weather is hot side sections take the preference.

This hive is not patented, and any one is at liberty to make and use it.

Page Co., Iowa.

The Prolific Rocky Mountain Bee-Plant.

BY D. W. WORKING.

I ONCE told the Editor an amazing story of the number of seeds produced by a single Rocky Mountain bee-plant—Cleome integrifolia. He dared me to tell the story for the American Bee Journal. Subsequently I made another count, the result of which was even more amazing than the first. I do not happen to have my notes at hand, and dare not give the figures from memory; but one of these fine days, after the frost comes, I mean to count again. Then look out for the story. At present I have to deal with another matter—the number of blossoms on a single plant at a particular time.

Those who are familiar with our cleome know that it is a progressive plant. Just now it is in all its glory of purple bloom, dashed with pink and magenta. But my memorandum book has this entry for June 24th: "Bee-plant beginning to bloom." And it will blossom and yield honey after the first light frosts of September. At the top of the cluster new flowers continue to open to sun and bee after the pods below, which testify to the first flowers, are ready to drop their ripened seeds.

The flower-clusters of cleome are as much as four inches in length in exceptional cases, with a diameter nearly as great. More often they are about two inches in diameter, with a length about a third greater. At the top of the cluster the individual flowers that are to be appear as round-topped buds; and there may be from 10 to 25 of them in various stages of development. Around and below these promises of sweetness are arranged the open flowers and the dying blossoms with tiny green pods arising from their hearts. Further down are the larger pods, some of them several inches in length.

A few days ago I noticed an especially symmetrical bee-plant standing beside the road. There were taller ones near, some of them with larger flower-clusters. This plant had the shape of the old-fashioned straw bee-hive of the pictures, or of the typical oak-tree, and was a mass of bloom from the ground to the top. I thought it a fine type of cleome in the open.

Since making mental note of this particular plant I have been watching for better ones. I have seen thousands that are taller, hundreds with larger flower-clusters, and a considerable number that seemed to have as many individual flowers in bloom. A drive of four or five miles this morning showed me acres of the plant that were musical with the hum of the thrifty honeymakers. A quarter of a mile from home I stopped and cut my typical cleome. (Of course I felt just a little like a robber; but there are more plants left than enough to supply the bees.)

Then came the measurement and the count. This particular plant was just four feet tall. Its greatest diameter was four feet and nine inches; and the transverse diameter was four feet. By actual count, there were 183 flower-clusters. I did not try to find the largest of these; but the largest one of the eight counted had 36 separate flowers open to the inspection of any curious old-maid bee that might have come along before eight o'clock this morning. The smallest of the eight had seven open flowers. The average (discarding the fraction) was 23.

A simple problem in multiplication is all that is left. If the average of the eight counted clusters is an average of the entire number of clusters on the "bee-tree," that particular cleome plant had 4,209 open flowers at one time—the morning of Wednesday, August 10, 1904.

I could estimate the number of bees that might visit such a plant during a single day, or during the two months of its blooming period; but I will refrain, and leave opportunity for the curious reader to exercise his imagination to such an extent as he may be inclined. The "boomers" of ginseng are not able to make half so alluring a showing as I could make for cleome, if I should try. But I have promised to refrain.

Arapahoe Co., Colo.

Convention Proceedings

Report of the Fourth Annual Meeting of the Texas State Bee-Keepers' Association, Held at College Station, Tex., July 5 to 8, 1904.

REPORTED BY LOUIS H. SCHOLL.

(Continued from page 584.)

"THE 4x5 SECTION SUPER AND ITS ADVANTAGES,"

was taken up by H. H. Hyde, who said that it was fast becoming the standard section. Being taller than wide it looks nicer, and having a large comb-surface it looks larger to the customer, and would bring a better price in the markets. In connection with this section he would use open separators. He used the Hyde-Scholl fences, and would recommend their use first, last, and all the time. They have been tried and improved for several years, and have proven to be advantageous in many ways over the old-style or the fence separators commonly put on the market by manufacturers. These fences will now be manufactured by all the leading manufacturers of bee-keepers' supplies, and can be obtained of them. The Hyde Bee Co. ordered last year 15,000 sections fitted with these separators. As the season was too far advanced at the time they were received, and honey was not coming in favorably, there were only about 3000 filled.

Udo Toepperwein said that undoubtedly the Hyde-Scholl fence was superior, as he sold more of that kind than any other last year, the bee-keepers making special calls for them. If he should judge from what bee-keepers have said about them, they must be a good deal better than the other fences. The demand for Hyde-Scholl fences has been so great that he will have to have all of his super arrangements fitted up with such fences from now on. He said that he found them to be the best sellers of any style he had.

W. H. Laws said that the production of section honey in Texas was of the utmost importance at the present time, and that it should be thoroughly ventilated at this meeting.

Mr. Hyde agreed with him on this, as there are now so many bees kept in Texas that we must produce section honey as well as comb honey in bulk and extracted.

During an average year it is all right to produce only bulk comb and extracted, as there is not any likelihood of an over-production of these two. But during an extraordinary year when there are heavy flows everywhere, it is an advantage to have section honey as well as the others. This works admirably, too, as the production of fancy section honey can not be done during a moderate flow, but it can be done during the better seasons. Therefore, we should have our surplus over bulk comb and extracted in section honey during a good year, while we do not need the section honey during a less favorable one.

A vote to the effect that the 4x5 section be endorsed as the standard section to be used in Texas was put, and resulted in 7 votes for and 6 against it, but after a reconsideration and a long discussion it was decided that the Association had no right to adopt any style of section, or any other kind of hives or supplies as a standard, and that every member was allowed to use the hives and fixtures he wanted to use, therefore the vote was ruled out.

"NATURAL OR ARTIFICIAL INCREASE"

was taken up by Willie Atchley. For the experienced bee-keeper artificial increase was better, but the novice would better depend upon natural swarming for his increase. If one has the experience he can make the cheapest increase in the fall during an inferior honey-flow. This will give him good, strong colonies the next season.

If natural swarming is depended upon, the bees swarm during the flow of white honey, and this causes a loss of surplus.

Z. S. Weaver gave the experience of a neighbor who tried to increase his apiary artificially. He did this in the fall, during the month of October, when there was no honey coming in, and of course he lost nearly all of the bees.

Another case is the one of the bee-keeper who tore his bees all up in the early spring for early increase, so that the colonies would be strong by the time of the honey-flow. He divided the colonies, and put the brood-combs in the new hive with a frame with a two-inch foundation starter between each comb. The same was done with the combs in the old hives. The result was most disastrous.

Mr. Hyde does not know when it is the best time to make artificial increase. Sometimes it is better done in the fall. and again better in the spring. There are several ways of doing this very cheaply. The first is to make the increase in the fall. Take good queens, divide the colonies and build them up with the brood-combs. That is, if there is a fall flow, and they will build up good and strong for the next year's honey-flow. The second way is to have the colonies strong in the fall with plenty of honey and good, laying queens, so that there will be lots of early brood in the hives in the spring. As soon as these become very strong, combs of brood are drawn from them and nuclei made. These are then built up. The third way, and a cheap one, is to use the weak colonies for increase instead of running them for honey. There are always some colonies in the apiary that are too weak to amount to anything as honey-gatherers, and these can be used more profitably in making increase. Divide them up into three or more, and build them up with full sheets of foundation. The next year you will have a lot of strong colonies for the honey-flow. In this way the weak colonies are worth more than if used for storing colonies.

Mr. Laws said that he had all of his bees out in the woods, miles away, and that he could not depend upon natural swarming for his increase. He wants a non-swarming race of bees, but has not got them yet. He can make his increase much more profitably in an artificial way. He tries to prevent swarming as much as possible, first, by giving plenty of room, and second, if they get too strong for this he draws brood-combs from them and makes nuclei. These he builds up, and it is a cheap way of making increase, as it is done while he prevents swarming.

In that time of the season, when the queen has laid all the eggs for bees that are necessary for that honey-flow, he resorts to "shook swarms." With this method all of the bees that are useful for that flow are shaken into the new hive and made to store the surplus. The brood is then used for increase and placed on a new stand, as it is not needed in the old colony.

He made 200 colonies of increase by simply drawing brood-combs from the upper stories of strong colonies and replacing them with full sheets of comb foundation. The brood-combs are then used in making nuclei by using 5 or 6 combs of brood to each, and filling up with full sheets of foundation.

All this increase is made with little cost. If the new colonies were not made the old ones would have swarmed and would have stored no honey. Then being out in the woods, and nobody to watch for the swarms, both the swarms and the surplus would have been lost.

The meeting then adjourned until 9 a.m. the next day.

SECOND DAY—Morning Session.

A committee was appointed to secure a better rate, and better transportation of honey. Complaint was made to the effect that shipments were delayed at points for a month at a time sometimes, and that honey did not reach its destination until after several months. This committee is to try to secure a better express and freight rate, and see if shipments can not be made in more rapid time. Also, to see if a special rate for drop shipments by express could be obtained. Much honey would be shipped by express if a lower rate could be obtained. This would mean rapid shipments from the producer to the consumer, and if such a rate could be obtained of the express people it would throw much business into their hands.

It will also be tried to get a commodity freight-rate for honey in car-load lots.

L. Stachelhausen, Will Atchley, and H. A. Mitchell are the Committee on Transportation.

A committee was appointed, consisting of Jno. W. Pharr, W. E. Crandel, and F. J. R. Davenport, to draft a petition and have it signed by every bee-keeper to the effect that we urgently try to get better foul-brood legislation and sufficient funds at the next meeting of the legislature. Committee to report later.

Udo Toepperwein requested that the bee-keepers all help to make the apiarian exhibit at the coming International Fair at San Antonio, this fall, one of the best that we have ever had. There will be several hundred dollars offered for premiums, and over three hundred have already been put up. Several hundred will be subscribed for by the leading business firms of that city, besides the regular premium funds of the Fair Association. Therefore, all the bee-keepers should do their best to make this a grand exhibit.

It would be well to state here that the Fair Association of San Antonio has taken a greater interest in the bee-keepers' exhibits matter than any other Fair Association that we know of. They have this matter at heart, and are doing all they can for the bee-keepers. So the bee-keeper should appreciate it and make his exhibits. It would be well to let Mr. Toepperwein know what you will have to exhibit, so that he can engage room for it accordingly.

H. H. Hyde announced that the annual meeting of the Southwest Texas Bee-Keepers' Association would be held at San Antonio during the time of the Fair this fall, and urged all bee-keepers to be present. As they are nearly all going to the Fair some time while it lasts, they could arrange it so as to be there during the time of this meeting, which will be announced later. The railroad fare will be very low, and all should try to attend.

The St. Louis Fair bee-keepers' exhibit, and what had been done, was thoroughly gone over by Louis H. Scholl, the apiarist of the experimental apiary at the College and Secretary of the Texas State Bee-Keepers' Association. He said that he had tried hard to get up a creditable exhibit from Texas, and had spent much time in writing to the bee-keepers of the State for their co-operation, but to no avail. They took too little interest in a matter of this kind, and instead of the State of Texas having the best and largest bee-keepers' exhibit there, it has nothing to show for what it is bragging about. After making several attempts to get up a good exhibit the matter had to be dropped. It is hoped that at another opportunity like this there will be more interest shown in the matter, and that Texas will be there to show her sister States that we are really what we claim to be. We can show that we have a good many things down here.

(Continued next week.)

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Yellow Sweet Clover Seed.

Dear Miss Wilson :—I noticed in the Sisters' column where Mrs. A. L. Amos speaks about yellow sweet clover blooming in May. I thought it would just suit me. What I would like to know is where I could get some seed.

Osage Co., Mo. Paul S. Bonnot.

Any leading seed dealer ought to be able to supply you. It might pay some one who has the white or yellow variety of sweet-clover seed, to advertise it in the American Bee Journal.

Unfinished Sections—Wholesaling Extracted Honey—Snakes and Bees—Virginia as a Honey State.

We have now 60 colonies of bees, all in good, healthy condition. We have taken off about 1000 sections, and extracted over 17 gallons, mostly clear and light colored.

Last spring we had over 100 "go-backs"—partly filled sections. Some soured. Mr. Highet thought the bees would clean out all the old honey before they put in the new. On taking off those sections I find them very dark, and of a queer flavor. I thought perhaps it was from dandelion, as there were quantities of flowers at that time.

1. What shall I do if folks don't like the flavor of that honey? Would it be best to feed it to weak colonies in the fall?

2. What is the best way for me to put up extracted honey to wholesale, if I can't retail all I have here?

3. Do snakes eat bees? I find them under the hives—garter snakes.

4. Is Virginia a good honey State?

Cook Co., Ill. Mrs. Bertha A. Highet.

1. It is a very dangerous thing to put honey of objectionable flavor on the market, as it spoils your reputation. Some one will be sure to say it is adulterated. Some that accept it as genuine honey will conclude that they do not like honey as well as they supposed, and therefore will not care to buy any more. You would better do almost anything with it rather than sell it.

It is possible that the honey stored in the sections is dandelion, although it is seldom that the bees store any surplus from this source, as it comes so early that it is all used up in brood-rearing, for which purpose it is of great value.

In any case, it was a mistake to use sections that had been left over winter with honey in them. The soured honey would be left in the comb to spoil that which was added, and even if it was not soured it would be granulated, and the least particle of granulated or candied honey in a section will have a bad effect on the rest.

The thing that should have been done was to have had the sections cleaned out dry by the bees last fall before it had time to granulate.

Your plan of feeding the honey to weak colonies is probably all right, for the "queer taste" is not likely to make it unwholesome for the bees. Then the comb can be melted up. Or you can melt up the whole business, let it get cold, take off the cake of wax, and use the honey for cooking, unless you object to the flavor. If it is sour it will make vinegar, one to three pounds of honey being used to the gallon.

The term "go-back" is not applied to unfinished sections left over winter and used the following season to induce the bees to start work in the supers—these are called "baits." When supers of sections are taken off with the corner or outside sections not entirely finished, these unfinished sections from a number of supers are put in a super and returned at once to the bees to be finished, and these are the ones that are called "go-backs."

2. Perhaps in 60-pound cans, although all depends upon your market.

3. Snakes are found under hives, and sometimes in them, probably because of shelter, and it is not likely that they do any harm, unless it be to frighten the bee-keeper.

4. It is not specially noted as a great honey State, although there are no doubt plenty of good honey locations.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

RETURNING AFTERSWARMS.

The rule for returning afterswarms twenty-four hours after will probably work nicely a great many times. I think, however, that when the swarm-fever rages its worst, it sometimes won't work at all. Hardly time enough for the excited minds of the little creatures to get level, and plainly not time enough for things at home to settle to one queen. Hive them in a temporary hive and set the same right by the door of the old hive. Shake them home about four days later. *Sometimes* afterswarms occur in times of such severe dearth that they have to be fed to keep them from absconding. Page 500.

CLEANING SECTIONS ON WIRE CLOTH.

How about cleaning sections of propolis by rubbing them over coarse wire-cloth tightly stretched? I'm one of the "don't knows" on that till I see it tried once. Rather afraid it's a lazy man's invention—calculated to do rapid and easy work, but never a first-class job. Also should expect it to fail totally when the weather is hot. Page 501.

COOL NIGHTS AND COMB-BUILDING.

Now perhaps that's so. Some localities and weathers such that comb-building is largely prevented by the coolness of the nights—and yet the honey comes in quite lively in the middle of the day. This would furnish an innocent reason for the harvest of extracted honey being very much larger than the harvest of sections. So we mustn't always scowl at such a report and say: "He snatches out his stuff long before it gets to be honey." Maybe he's innocent as a babe, after all. Page 501.

SWARMING AND IMPORTED QUEENS.

Even if Italians of the first generation from Italy are a little less inclined to swarm than our home stock, there don't seem to be any practical way to realize much on that fact. Can hardly afford to keep all our colonies supplied with imported queens. The seeming quality might be—might be imagined to be—only because queens having taken a very long journey seldom lay with maximum rapidity afterward. Page 502.

THE CHUNK-HONEY BUSINESS.

It's an "illigant" berating Mr. G. C. Greiner gives the chunk-honey comet on page 503. But the comet most likely will keep swishing right along the heavens, with its "irregularities" of tail and head, just as if not a word of objurgation had been hurled at it. Sad. But *we* don't have to offer chunk-honey to the customers to whom we wish to sell sections.

ROOMY UNCAPPING-BOX.

That roomy uncapping-box of H. G. Sibbald's makes me feel covetous. I neither have a very roomy uncapping arrangement nor room to place as roomy a one as I have. Page 513.

EXTRACTED VS. COMB HONEY CONSUMPTION.

When a city uses only 700 pounds of sections to 14,000 pounds of extracted it shows that excellent missionary work in favor of the latter has been done—and that the missionary inside the can is not a hypocrite, as said missionary has been known to be. Page 515.

ADVICE ON BEE-BOOKS AND BEE PAPERS.

Have a bee-book and take a bee-paper—more than one of each if possible—you're all right, dear Boss, to ring the changes on that vigorously and oft. But shall I tell you what has just popped into my mind? Perhaps the vice of having both *and not reading them* is more frightfully prevalent than most of us have any idea of—just merely glancing at the paper when it comes, and leaving the book on the shelf time out of mind. I even suspect that systematic effort to make "subscribers" into "readers" would eventuate in more profit than the same effort to make non-subscribers into subscribers would. Who'll join the class? Who'll join the class—of those who promise to read their text-book through again within six months? You see, if they do that they'll read the paper better; and if they do that they won't drop off the list—and "penny saved better than penny earned," you know. Page 515.

THE FLIGHT OF BEES.

Nothing can be told by that bee in the engine cab. First time it got entirely clear of the air-friction of the train it undoubtedly disappeared like a flash. At first thought, hawk 24 miles an hour and robin 38 seems an absurd mistake. If dog went 24 and rabbit 38 how soon would he catch him? Nevertheless small birds (many kinds, I think) are often seen chasing the hawk, presumably in revenge for eating their nestlings. They thump his back, pull his feathers, and circle 'round in a way that puts in many more rods to the furlong than the hawk can. Page 516.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Queen That Was Probably Killed.

On or about June 1 I had a prime swarm issue. I hived them and in hiving lost the queen. The same day I gave them a frame of brood and they reared a nice queen. She laid about five frames full of worker-eggs, and about two weeks ago she disappeared and has not returned. What became of her, and why did she leave the hive?

VIRGINIA.

ANSWER.—I don't know. It is not likely that she left the hive, more likely she was killed in the hive. Sometimes a queen is accidentally killed by the bee-keeper; sometimes a small swarm of strange bees enter and kill the queen; sometimes bees ball their own queen when frightened, and may kill her.

Wintering Bees on Sugar Syrup.

Will bees winter successfully fed entirely on syrup made of granulated sugar? About how many pounds of syrup will an ordinary colony consume from Oct. 1 to May 1?
MINNESOTA.

ANSWER.—Yes, many colonies have been thus wintered, and sugar syrup is better than some kinds of honey, but not better than good honey. About 22 pounds of best granulated sugar will answer. The best way is to feed early equal quantities of sugar and water. It is none too early to feed now. If fed later a thicker syrup must be made, 5 pounds of sugar to 2 of water.

◆

Was It Foul Brood?

Last October a friend of mine told me that his bees had been inspected by a foul-brood expert, and foul brood discovered in one of his best colonies. The inspector advised him to have the hive burned, bees, combs, and all. I asked permission to inspect it before it was destroyed, as I had never seen a case of foul brood, and wished to learn how to distinguish and treat it. My friend gave the colony to me, and I took it to my farm, placing it one-half mile from my own apiary of 14 colonies. I did not examine it for some time, but when I did I found the hive full of bees, brood and and honey, with no sign of disease that I could see. I examined them again in April, and found everything all right. I did so several times after that, and it seemed to be very prosperous. May 25 I removed it to my own apiary, and May 26 it cast a fine, large swarm, which I saved. Eight days later another swarm issued, and this, too, I saved. About 30 days later I inspected the 3 colonies, and found both swarms in fine condition, and the prime swarm had the hive filled and was ready for the super, but the parent colony was in bad condition, with little honey, not very many bees, and dead brood in all stages. The uncapped brood had both ends turned up, and everything had a bad look, but there was no bad odor. I shook the bees into a new hive on clean foundation, and they went to work with renewed energy, and the queen (which appeared to be a good one) was soon laying; then brood appeared with no sign of foul brood.

I boiled every part of the old hive, also the combs, honey, brood, and some bees that were just hatching. I have since put the hive together and repainted it, and am going to use it.

I do not think it was foul brood, but whatever it was it was carried over from last season, and only broke out when the colony was reduced by excessive swarming.

What do you think was the trouble? and do you think it is apt to appear again? The combs in the foul-broody hive were very old.
KANSAS.

ANSWER.—It doesn't seem that it could be foul brood, and yet it will not do to be too positive. Even genuine foul brood seems to disappear sometimes when a good flow of honey is on, only to reappear later. If it turns up again, your best plan will be to send a sample of the brood to General Manager France, together with a dollar for membership, if you are not already a member of the National Bee-Keepers' Association.

◆

Burr-Combs and Propolis—Bee-Space Between Supers.

My two chief sources of trouble in getting a satisfactory crop of comb honey during the three years I have been experimenting, are burr-combs between the tops of brood-frames and bottoms of section-holders, and propolis between the top of sections and honey-board. Taking the last-named trouble first, I sometimes found propolis filling the entire space—⅜ inch—from the top of the sections to the honey-board.

First I tried cutting strips of heavy white paper and tacking them down on the top of the sections (leaving the bee-way open at each fence). The next day I wondered what white stuff the bees were carrying out, but never imagined it was the paper, so you may judge of my surprise when I looked into the super on the third day, and found nothing left but the tacks. I am now using oilcloth, and find that gives better results, but I want something better.

Why is it necessary to construct the super so that we have a bee-space on top of the sections? When oilcloth is used on top there can be no bee-way. Why have any? It seems to me that if the upper edge of the super were planed off so that the honey-board would rest evenly on top of the super and sections, there would be little propolis there.

In regard to burr-comb, I use the Langstroth hive, 8-frame, with Hoffman frames and ⅞-inch top-bar. Each super I put on seems to be worse than the preceding one. In taking a super off last week there was so much burr-comb that frames and all came with the super.

I am trying a Danzenbaker hive this year for an experiment, and I find no burr-combs there at all. Is this your experience?
MASSACHUSETTS.

ANSWER.—I thought I had had in my time some bees that scored high as storers of propolis, but I never had anything that would fill a ⅜-inch space over sections. (It may be said in passing that a ⅜ space over sections is rather large; ¼ is usual. But it would not help the glue question to have a smaller space.) I don't know of anything likely to help such a case unless it be a change of bees, and there is a marked difference in bees as to propolis. Oilcloth over sections will make some difference, but the bees will thrust a lot of glue under the oilcloth on the edges of the sections. If you plane down the super so as to have no bee-space on top, it will be much the same as with the oilcloth; you can hardly make so close a fit that the bees will not push propolis in the crack. Besides, if a board fits down tight on the sections, you will be sure to kill many bees unless the work of covering is so slowly done as to be intolerable.

I have used oilcloth, also wide frames in which the wood fit close down upon the sections, and much prefer to have nothing touch the tops of the sections. The little glue that is spread over the tops—generally only late in the season, and less than in either of the other ways—can readily be scraped off.

The burr-comb problem is more difficult to manage. Burr-combs will gradually accumulate between top-bars as time goes on—the Danzenbaker probably the same as the others when older—and there may be more or less building between top-bars and anything placed over. If you will take the trouble to clean the burr-combs from between top-bars in spring, there will be little trouble with burr-combs over them. The trouble will be aggravated if the bees are crowded for room. If your bees are good honey-gatherers, and you try to limit them to two supers at a time, you may count on burr-combs galore. A space not more than ¼ inch over top-bars and between supers, plenty of super-room, and cleaning up each spring will meet the burr-comb nuisance perhaps as well as anything else you can find.

◆

Italianizing Vicious Bees.

I have handled bees for over 12 years, but have never seen any so vicious as some I now have. I wish to Italianize them this fall. How can I "subdue the brutes" long enough to hunt out and kill the grand "head center" of all their meanness? Tobacco won't subdue them—as soon as they can breathe they are "up and at it" again. I believe they have the longest stingers—if not tongues—of any bees I ever saw—ordinary summer clothes are no protection. They are great workers. I have just taken off some honey, and my right wrist is big enough for two. I've handled some very cross bees, but these take the cake—also the plate. I hate to own up beat, but I reckon that's about the size of it.
NEW YORK.

ANSWER.—I hardly know. You might try chloroform. Or, try this: Move the hive some distance from its stand, setting on the stand another hive containing perhaps a frame of brood so as to catch the returning field-bees. In about two days the fielders will all have left the hive, and the younger ones will be more ready to listen to reason. When through manipulating them, return the hive to its old stand, allowing the old bees to join the colony. You might also try spraying thoroughly with very weak syrup.

FROM MANY FIELDS

Bees Not Doing Well.

I commenced the season with 9 colonies of bees and increased to nine, and have taken off about 100 pounds of comb honey. They don't seem to be doing much at the present time.

Long may the American Bee Journal flourish. I give it credit for most of my success in bee-keeping.

MRS. C. W. SNYDER.

Logan Co., Ill., Aug. 11.

A Report—Instructing the Public.

My crop is pretty fair. I have 2200 pounds of honey so far from 34 colonies, spring count. My success is due principally to using empty combs. (It has been too cool for comb building). Much of the comb honey would not grade No. 1 in Chicago, but dark honey goes just the same here as the snow-white, if it is not too dark. I will have a good demand here for honey.

I think we should give serious thought to the matter of instructing the public as to the value of honey. There are thousands of would-be honey consumers who never saw a modern beehive, and it is easy for them to believe that bees would not store honey in square boxes as white as snow. When even professors in chemistry who are paid by the people, make such bungling mistakes as to give out to the world that comb honey is manufactured, what can be expected of the great mass of people who have never seen a bee-paper nor a modern beehive?

Prof. Allyn says that he found comb honey on the market, which, when analyzed, was shown to contain glucose, and which was flavored with formic acid. Bees' honey always contains formic acid, and as the honey is predigested it always contains glucose, or grape sugar. But that glucose is entirely different from the commercial glucose. The word glucose should not, however, be used in any newspaper in connection with honey, as the public will not understand that the chemical term glucose, used for grape sugar or part predigested nectar, is entirely different from the filthy stuff that is used in syrups. But the glucose found by Prof. Allyn was just what is so valuable in honey, as is also the formic acid.

When we remember that honey is so favorably spoken of in the Bible, and is a food that is as an all-wise Creator has intended it to be, we can only conclude that we are doing the public a great favor in urging its daily use. Nowadays the people want to know the "why" of things, and it is right that they should, as they are very much imposed upon in many ways. Every bee-keeper should contribute a little in informing the public of the real value of honey. If he would do this, which he very easily could by distributing pamphlets and using the local papers, we would need have no fear of a glut in the market, nor would we have any use for a honey exchange. There are a great many people who believe that comb honey is manufactured and it is the snow-white sections of snow-white

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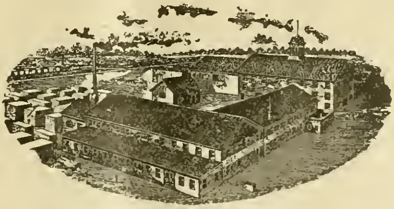

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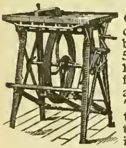

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35A5t BERCLAIR, TEXAS.

honey, which lead them to believe it. I have no fault to find with fancy honey, but people should be informed as to how we are able to get the bees to store it. J. E. Johnson.

Knox Co., Ill., Aug. 13.

Don't Like Honey-Dew.

We have taken off some honey, and have had nearly 100 pounds of black, nasty-looking "stuff" that some "old-timers" call "honey-dew" honey. We have sold it all, but we don't like it.

Mrs. H. H. Hunt.

Hardin Co., Iowa, Aug. 11.

Bees Winter-Killed—A New Start.

I had poor luck with my bees last winter, but this summer I have taken a new start, and hope to do better. I had 30 colonies last summer, and they all winter-killed but 4. I now have about 10 colonies.

I find a great deal of valuable information in the American Bee Journal. The song, "The Hum of the Bees in the Apple-Tree Bloom," is very beautiful. It is new here, and takes well.

J. L. Simpson.

Rock Island Co., Ill., July 8.

Poor Season.

This has been a poor season for me so far. I put 60 colonies into winter quarters, and only took out 13 in the spring. They have not swarmed any this year, nor have they stored over 25 pounds of honey. I wintered them on the summer stands. Edwin Ward.

Chautauqua Co., N. Y., Aug. 18.

King-Birds and Other Birds that are Enemies to the Bee.

I have kept bees for 25 years or more. I keep them because I like the bees, and also the honey. I believe my family consumes as much honey as the majority of families of six, and as for myself I very seldom eat a meal without it.

I do not understand that statement, page 541, in regard to finding no bees in the stomachs of king-birds. They do not eat the bees, but they do kill hundreds of them. I have often watched them catch as many as 20 or more. Then I would shoot the bird. But I couldn't find a piece of a bee in the stomach. If you will watch the birds closely you will notice that they drop the bee after tearing it in two and getting the honey-sac. I kill every king-bird that comes on the place. Now, don't take it from this that I don't love birds, for I do. I put up boxes for bluebirds and wrens to build in, and we always have plenty of them. In the winter time we always feed the redbirds, and they come for the food as regularly as chickens.

On a cold, wet day last spring, when scarcely any bees were flying, a redbird alighted on one of the hives. I watched it, and at first thought that it was picking up dead bees, but upon making a closer examination, I found that it was catching live ones. I chased it away, but it came back every time. It stood on the alighting-board, catching the bees as they came out, then flying up on a hive and eating them—or at least, I thought it was eating them. It caught so many that I finally

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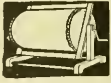

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Italian Queens That are HUSTLERS.

My crop last season was about 40,000 pounds of honey (nearly half comb) from 210 colonies, spring count, and increased to 280 colonies, which shows my bees are hustlers. Queens from this stock by prompt mail: Untested, 75c each; Tested, $1.00.

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" Comb Nucleus (no Queen)........... 1.00
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All grades ready now. Safe arrival guaranteed.

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Italian Queens secured by a cross and years of careful selection from Red Clover Queens and Superior Stock obtained of W. Z. Hutchinson. I can furnish large, vigorous Untested Queens at 75 cents; after June 15, 60c. Tested Queens, $1.00; after June 15, 75c. Write for discount on large orders.

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RETAIL AND WHOLESALE,

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GUS. DITTMER, Augusta, Wis.

Prompt Shipments Our Specialty.

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Beeswax wanted at highest market prices.

LEWIS C. & A. G. WOODMAN, Grand Rapids, Mich.

shot it. I couldn't find a bee in its crop, but found 85 dead bees on the hive. It was after the honey. I believe an expert entomologist would have said that that bird had eaten no bees.

My father used to shoot king-birds when I was a boy. After he shot the older ones we caught the young ones for pets, but found they would eat nothing but bees.

As to king-birds keeping hawks and crows away, I'll admit they fight them a good deal, but don't keep them away. I always shoot the hawks and crows, and destroy their nests. I think any one is foolish who does not kill the birds that eat bees, especially if he is rearing queens.

I don't believe chickens eat bees, for my bees are close to the chicken-yard. I have often seen the bees carry one that couldn't fly and drop it down among the chickens, but I never saw them eat one yet. H. B. TERRIL.

Aug. 15.

A Little Mixed-Up Bee-Talk.

Whel, I have took the Amerikan bee paper a long time, and I've been seeen a good many bee-keepers have been riting up about ther bees, so I thought as my bees are doen all rite I'd rite some to.

My Ant Martha learnt me somewhat about riten and spelen long ago. I do remember that was a long time ago. I will never forgit poor Ant Marth. Things come to a feller for good some time.

I dont just read all thats in the bee-paper, as I am a little slow at readen, and some things I dont understand very wel, but mayby you see mayby it will all come to me some time.

About the big letters some places Ive forgot where to put them and perids and comos if Mr. York or else Editor (now if I dont spel it rit its that way in the Bee Journal) what I was goen to say mayby one of you would fix that all rit.

I notis Mr. Davenport rites good about bees. Hes in my same state. Wonder if he is any relasion to that Davenport in N. Y., who says he haches chicken eggs in bee-hives. Now I want to say to every body when you want to hach chicken eggs or turky eggs dont try to let the bees have a hand in it. It will do everybody good to remember that. Now, when I try to take honey to extract some times I find the queen, or king some say, up there and then its lots of young bees comen, so I've got a job on hands in place of taken honey. They got queen-excluders to keep the queen down, and I've got that, but sometims I get careles, and sometims I don't know it is, but I've notised they always take ther eggs where the queen is. Its funny, but of course its natural, that is what shes ther for to see about that. The good way to do is be very careful to not let it hapen, but when it does hapen don't git mad.

Whel, I must close, but if I had more time I would tel about my nabor. He has some bees to. A few days ago he wanted me to help him out about how he lost a queen. He said when he looked one time they had queen cels, and he saw they had eggs (some times I say nits, but I gues thats rong) that they had eggs and larks. And another time when he looked the cels was purty well gone and no eggs, so the queen was gone. I told him the chances was she had swarmed. But he didnt want to think so. Of course I couldnt help him much. Any way, if they were mine I think he wouldnt need to wory about it for awhile; mayby it wil turn out all rite. Its a good way I think to reson on things, and then take it as nice as you can. Anyway I think so. Whel, as I sed, now I will close.

CHARLEY PLACID.

Todd Co., Minn., Aug. 13.

A Hoosier at the Fair.

Aug. 2, myself and wife started for the World's Fair. Having been a bee-keeper all my life, I did not fail to see the honey exhibits as well as other displays.

We took a Mason jar of lemon juice, well sweetened, and had all the good, cool lemonade we could drink, by putting a little of the juice in our cup and then filling it up with the ice-water furnished on the cars. In the same way we had plenty to drink on the grounds, and when returning home.

Sweet clover was in blossom along the way through Illinois, but I don't think it amounted to much.

Of the honey exhibits, I came across only one, and that was in the Agricultural Building—that of Emerson Bros., of California. They had extracted honey in cans and round bottles, and comb honey in one-pound sections and in glass globes. The comb was arranged in 4 pillars.

In the West annex of the Horticultural Building I met Mr. Danzenbaker and wife with a display of Root's goods, consisting of extractors, smokers, foundation machines, observatory hives, bee-literature and the Danz. supers. Mr. D. showed me some comb honey just from North Carolina in the 4x5 plain sections—nice, clean, no propolis and no scraping, each one weighing just a pound. He also explained the merits of smokers and how to remove brood-frames from his hives.

Across the aisle Senator G. W. Swink, of Colorado, had a large display of alfalfa honey. The comb was in 4¼ bee-way sections, over 3000 pounds. Quite a lot of it was in slabs, being built in the Langstroth brood-frames. Bell jars looked enticing filled up hexagonally and in all shapes. Large stars of comb honey attracted everybody's attention. The extracted honey was put up in Pouder jars, globes and cans. But what particularly pleased me, and what every bee-keeper ought to see, was the beeswax. One pyramid of cakes weighed 700 pounds, the bottom cake alone weighing 150 pounds. There were wax apples, corn, lions, horses, roosters, etc., plaques of leaves,

If you want the Bee-Book
That covers the whole Apicultural Field more completely than any other published,
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The Novelty Pocket-Knife.

Your Name and Address on one side—Three Bees on the other side.

HOWARD M. MELBEE,
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[THIS CUT IS THE FULL SIZE OF THE KNIFE.]

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last-time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00.) We will club the Novelty Knife and the Bee Journal for one year, both for $2.00.

GEORGE W. YORK & CO. Chicago, Ill

☞Please allow about two weeks for your knife order to be filled.

flags, buildings, etc., made of beeswax.

Many of the States did not have their apiarian supplies up yet, and others were just coming in. But I am sure by the time the National Convention meets in September there will be more to see. Even as it is, it would pay any bee-keeper to go and keep himself abreast of the times. Outside the apicultural exhibits we saw and enjoyed many things that will be a pleasant remembrance to us for many days.

EVAN E. EDWARDS.

Madison Co., Ind.

CONVENTION NOTICES.

National at St. Louis.—The annual session of the National Bee-Keepers' Association for 1904 will be held in September, at St. Louis, Mo.

Sept. 27 and 28 will be devoted to Association work and its interests. We expect many prominent foreign bee keepers to be present on these days.

Sept. 29, National Day.

Sept. 30, Inspectors' Day. Twenty bee-inspectors from all over the United States and Canada are counted on to introduce and discuss "The Diseases of Bees," etc.

Mr. N. E. France will exhibit, in the Convention Hall, a large map of the United States, Canada, Cuba and Europe. Each State and Country will have a shelf attached to the map with a one-pound sample of each kind of honey produced. Many other exhibits of special interest will be shown.

We expect to see the largest gathering of bee-keepers ever held in this country. A more detailed program will appear later.

GEO. W. BRODBECK, Sec.

Los Angeles, Calif.

Missouri.—The Missouri State Bee-Keepers' Association will meet Sept. 26, in St. Louis, in the same hall to be used by the National Bee-Keepers' Association. Further particulars later. Arrangements are being made for our accommodation by C. P. Dadant, in connection with the National Association.

Wakenda, Mo. W. T. CARY, Sec.

Wanted.—The Western Illinois Bee-Keepers' Association will meet in the Court House at Galesburg, Ill., Tuesday, Sept. 20. All who are interested in bees are cordially invited to attend. The convention will begin at 9 o'clock a.m., and last all day. E. D. WOODS, Sec.

J. E. JOHNSON, Pres.

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Fancy Comb Honey from White Clover,
in no-drip cases, at once. State your lowest price for SPOT CASH, the average weight of honey per comb, all definite and final in first letter. We answer mail and pay for goods promptly. Plenty of references if desired.
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Yours for business, THOS. C. STANLEY & SON,
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EXTRACTED AND COMB.
Mail sample and state price expected delivered Cincinnati.
Queens Now Ready to Supply by Return Mail
Golden Italians, Red Clovers, Carniolans,
Price for Untested:
One, 75 cents. Six, $4.00. Twelve, $7.50.
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HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, Aug. 18.—Some new honey is on sale; No. 1 to fancy white comb brings 12@13c; so far the demand is of a slow nature. Extracted, good supply, and white grades sell at 6@7c; amber, 5@6c, according to kind, quality, flavor and package. Beeswax, 28c.

R. A. BURNETT & Co.

CINCINNATI, O., Aug. 19.—The tone of the comb honey of this year's stock is becoming stiffer, producers claiming it to be not so plentiful and therefore ask higher prices. I quote fancy white comb honey from 15@15½c.

Extracted is showing no change. Amber, in barrels, 5¼@5½c; in cans, ½c higher; water-white alfalfa in cans, 6½c; fancy white clover, in barrels, 6½@8c. Beeswax more plentiful, brings 28c per pound. C. H. W. WEBER.

BOSTON, Aug. 20.—The honey market is in a very unsettled condition; or, rather, we might say that the absence of any demand practically makes no market. As a general thing, we do not look to see a demand until from the middle of September to the first of October. By this time, cooler weather creates a certain demand. Prices at this time are, therefore, practically normal. The very finest thing is bringing 16c and from that down. Stocks are coming in very slowly, but that is to be expected at this time.

BLAKE, SCOTT & LEE.

NEW YORK, Aug. 19.—A few lots of new comb honey have arrived, but not enough to establish a fixed price in quantity lots. We do not expect large receipts before the second week in September, and will not be able to give definite quotations until that time. Extracted honey is in fairly good demand at unchanged prices.

Beeswax dull and declining. Market price being now 27@28c. HILDRETH & SEGELKEN.

KANSAS CITY, Aug. 11.—The supply of honey is increasing. The demand is improving. The market here to-day is $2.75, but we look for it to go higher next month on account of the short crop of honey this season in this section. Extracted slow, 5½@6½c. Beeswax good demand, 30c. C. C. CLEMONS & Co.

ALBANY, N. Y., Aug. 25.—Honey demand improving some now. Receipts of new crop are light as yet, but we hear of quite liberal offerings at country points, indicating lower prices later when the "behind time" fellows get their crop ready. We quote fancy white, 16@17c; A No. 1, 15c; No. 1, 14c; mixed and buckwheat, 12@14c. Extracted, white, 7@7½c; buckwheat and mixed, 6@6½c. H. R. WRIGHT.

PHILADELPHIA, Aug. 10.—Some comb honey has been arriving in this market the last week, but hardly enough to fix the market price. Everything depends on the crop, which is still uncertain. Some few sales made of fancy comb at 16@17c; No. 1, 14@15c. Extracted honey arriving freely and selling at 7@8c for fancy white and 6@7c for light amber. Beeswax, 26c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

SAN FRANCISCO, Aug. 10.—White comb, 1-lb. sections, 12½@13c; amber, 9@11c. Extracted, white, 5½@6c; light amber, 5@5½c; amber, 4@4½c; dark amber, 3¼@3¾c. Beeswax, good to choice, light, 28@30c; dark, 26@27½c.

Market is quiet, and for other than choice to select is not favorable to the selling interest. There is not much water-white honey offering, but considerable of amber grades, and scarcely any inquiry for ordinary qualities.

HONEY AND BEESWAX
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199 SOUTH WATER ST. CHICAGO, ILL.

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OF ALL KINDS.

Langstroth on the Honey-Bee—Revised
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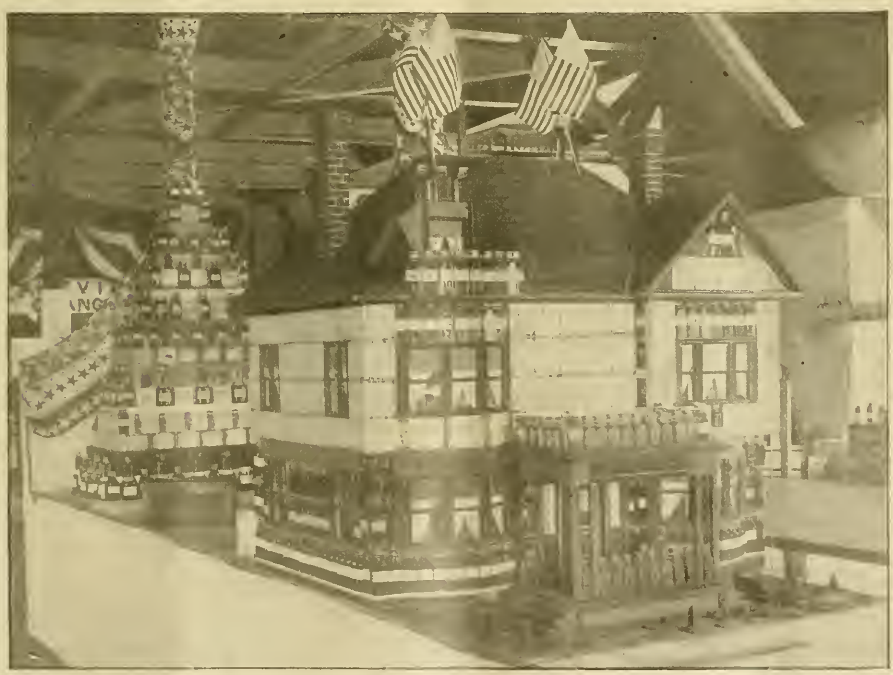
44th Year. CHICAGO, ILL., SEPT. 8, 1904. No. 36.



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The price of the course is $25.00, including a full colony of bees. As the readers of the *American Bee Journal* have bees it will not be necessary to supply them; and as we want about a dozen students AT ONCE who have some knowledge of bees, to finish the course by the middle of winter, so we can recommend them for positions in 1905, we will enroll a limited number at once for the full course for $10.00. This covers the entire series of lessons, personal answers to all inquiries, text-books, etc. Do not wait. The time is short to complete the work, and a limited number only taken at this figure.

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Orders in Sept., 7 per cent.	Orders in Oct., 6 per cent.
" " Nov., 5 per cent.	" " Dec., 4 per cent.
" " Jan., 3 per cent.	After January no discount.

This applies to all general orders with the following exceptions:

Glass and tin honey-packages of all kinds; scales, books; burlap, rubber stamps, labels, wheelbarrows, lawn-mowers, bushel boxes, bees and queens, and all goods listed in special catalogs and circulars other than our general catalog of bee-keepers' supplies. The discount is intended to apply mainly to hives, frames, foundation, sections, section-holders, separators, fences, shipping-cases, extractors, smokers, and other bee-keepers' requisites too numerous to mention, listed in our catalog before page 26, including pages 28, 35, and 36.

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NOW IS THE TIME TO ORDER QUEENS

if you wish to introduce this fall.

RED-CLOVER STRAIN REARED IN OUR YARDS.

Untested queen	$ 1 00
Select untested queen	1 25
Tested queen	2 00
Select tested queen	3 00

Let us book your order *now* for a breeding queen to be delivered 1905. Our trade in breeding queens has been so heavy that to be sure of your queen you should place your order soon.

Breeding queen	$ 5 00
Select breeding queens	7 50
Extra select breeding queens, 1 year old	10 00

We make a specialty of imported queens. If you wish a fine breeding queen get one of these. Introduced now they will be ready for business next year. We furnish them promptly.

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Fair imported queens	$3 00
Best imported queens	5 00

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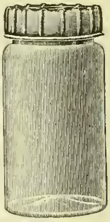

We have found a new glass jar for one pound of honey, which we think surpasses any other style we ever offered. It has a glass top which screws on to the glass jar with a rubber gasket between. The joint is on a taper so that, the further you screw the cover on, the tighter it makes the joint. It can be sealed absolutely air-tight; has no metal to rust or corrode. It is about ¾ inch higher than the No. 25, which improves its appearance. We sell them at the same price as the No. 25, and have a carload in stock ready to fill orders. We still have some No. 25 in stock for those who may prefer to continue with it. We believe, however, the Simplex jar will take the place of the No. 25.

The A. I. ROOT CO.,

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Editorial Comments

Adulterated Beeswax.

In Europe thousands of foundation presses are in use by individual bee-keepers, a chief reason being the difficulty of buying pure foundation. In this country nearly all bee-keepers prefer to buy their foundation, because they can buy it of such excellent quality, and without any thought of adulteration. Now comes, in the Canadian Bee Journal, from Prof. Shutt, Chemist of the Dominion Experimental Farms, a report in which he says:

> "In March of this year, however, a request was made by Messrs. Goold, Shapley & Muir Co., for an analysis of certain beeswax they had purchased from the United States, on the ground of suspected adulteration. In the interests of the bee-industry, it was deemed desirable to accede to this request, and the examination was made. The results pointed to the presence of paraffin in all the samples, varying approximately from 25 percent to 29 percent.
>
> "Unlike the adulterated 'foundation' of 1890, these samples possessed a melting point practically identical with that of genuine beeswax, showing that the adulterant must be of the nature or ozokerite of ceresin—the former a naturally-occurring paraffin, and the latter its refined product."

The name of Goold, Shapley & Muir Co. is given as at one end of the transaction, but it would be a pretty sure guaranty against repetition, and it is only fair to honest manufacturers that the dishonest ones should be exposed. Turn on the light.

Drones Getting Their Own Lunch.

The following letter has been sent us with the remark, "Seeing is believing":

DUPAGE CO., ILL., Aug. 19, 1904.

Dear Sir:—You ask for information on the feeding of drones by workers. Now, it is pretty hard to give positive testimony, because bees are not transparent, but I can certify as to what they appear to do and you may draw conclusions.

For three years I have had an observatory hive in my library window, and being a partial invalid frequently watch the bees for an hour at a time. And this is what I have noticed:

When drones are "laying around" on the comb they are frequently surrounded by a bevy of workers feeling them with their antennæ, or perhaps licking them with their tongues; but whether feeding them or making their toilet, I don't know. But when a drone comes home from a flight he makes a "bee line" for the nearest uncapped cell of honey, and stays there until he is apparently drunk.

I have never examined a drone's stomach before and after, or smelt his breath to see if he had been drinking, but circumstantial evidence indicates that while at times he may have his meals served to him by the workers, when he comes in with a real brown thirst on he goes to the cupboard and helps himself.

Doubters, get an observatory hive.

Yours very truly,
RALPH D. CLEVELAND.

This is very direct testimony, and agrees with that of "Arizona," page 369, who says he has seen hundreds of drones helping themselves. There still remains the question, "Do drones need to be fed at all by the bees?" It will hardly do to answer this by saying, "Yes, for it is well known that workers do feed drones, and would they do so unless it were necessary?" For a worker is often seen feeding another worker, and no one would claim that as proof that such feeding is absolutely necessary.

Strength of Honey-Vinegar.

At the Ottawa Experiment Station some experiments have been made regarding the amount of honey to the gallon for best results in making vinegar. From one to six pounds of honey to the gallon of water were tried, the temperature being usually from 65 to 70 degrees. Prof. Shutt reports in the Canadian Bee Journal:

> "Though undoubtedly the temperature was too low for the most rapid conversion, the results plainly indicate that, as regards the strength of the honey solution, the fermentation is retarded, when the strength of the solution exceeds three pounds per gallon. As far as the work has gone the strongest vinegar was produced from the two-pounds-per-gallon solution, and the probability is that when the experiment is completed it will be shown that the most economical strength of the honey solution will lie between one pound and three pounds per gallon."

The Antennæ of the Bee.

E. F. Phillips, Ph. D., has been making some experiments and observations with regard to the antennæ or "feelers" of the bee, as reported in Gleanings in Bee-Culture, and confirms the conclusions of Huber and others. Probably most bee-keepers have observed the lively way in which worker-bees sometimes strike their antennæ against the antennæ of other workers. That seems to be their way of talking to one another. But not every bee-keeper knows that these same antennæ contain, besides the organs of touch, those of smell, and perhaps of hearing. Indeed, if the antennæ be removed, the most of the bee seems to be gone.

Huber tells us that when both antennæ of a queen are cut off close, she is no longer regarded with the same respect by the workers, and instead of laying eggs as usual drops them anywhere. Dr. Phillips says:

> "In experimenting along this line I cut the antennæ from a virgin queen about three hours old, and put her on the comb of an observatory hive, and she was at once

balled. This was repeated with another hive. She was rescued from the workers, and confined in the hive in an introducing-cage containing candy, but in a short time died, probably of starvation, for I am sure she was not stung by the bees in the ball, for she was taken out at once and I never lost sight of her. Although there was candy in her cage, she evidently did not recognize it as food, since she was not attracted to it by smell, and on account of the loss of her antennæ she was not fed through the meshes of the wire-cloth."

Baby Nuclei in Queen-Rearing.

Editor Root says that "these little lots of bees will not prove to be satisfactory unless they have brood, a little feeding, and they must be handled without smoke the greater part of the time".

But Dr. Miller reports success with neither brood nor feeding, in which he follows the example of W. H. Laws. Very likely better success may be secured with brood, and feeding may be important if honey is not coming in. It can hardly be necessary to use smoke at any time in handling such miniature colonies; and Editor Root says it is likely to beget robbing.

Let it be very distinctly understood, however, that no one advocates these small nuclei for anything more than fertilizing. A strong force of bees should be used for starting cells, and up to the time the virgins are about ready to emerge from their cells.

Miscellaneous Items

Hon. Eugene Secor, well-known as the "Poet Laureate of Bee-Keeping," is still "at it"—writing poetry, we mean. The following from his rhythmic pen was read at the Sixth Annual Farmers' Institute of Winnebago Co., Iowa, in 1902, but it is just as good to-day as when it was written:

BETWEEN THE PLOW-HANDLES.

What man in all the Universe of God
  Has better right to look aloft and say,
"I'm partner with the Lord. I turn this sod
  To feed His hungry children day by day?"

With all His plentitude of sun and rain,
  And whispering winds from out the ardent South,
He needs the whistling plowman's cheerful strain
  And sinewy arm, to fill each waiting mouth.

Who plows a field says to despairing souls,
  "Hope is not dead; look up and see the sun."
Who plants, believes that He who suns controls
  Shall bless the labor thus in faith begun.

Kings of the Earth are they who plow and sow,
  If in that work they do their very best.
No need to envy poor rich men who go
  About their greedy quest but crave for rest.

Sweet sleep is given to him who tills the soil,
  And sweeter peace of mind, because he knows
That no man's poorer for his fruits of toil,
  Ingathered from the bounty Heaven bestows.

* * *

An Innocent Make-Believe.—Lady Henry Somerset, so well known for her temperance work, relates that her sympathies were first enlisted in philanthropic service for poor children by the following incident:

"It was in this way," she said. "I was moved in that direction by the rare patience and imagination of one little boy. His example convinced me that patience was one of the qualities I needed most, and in seeking it I grew into that work. I was in a hospital on visiting-day, while the doctors were changing a plaster-cast which held a crippled boy's limb. The operation was exceedingly painful, I was told; yet, to my surprise, the little sufferer neither stirred nor winced, but made a curious buzzing sound with his mouth. After the doctors left I said to him:

"How could you possibly stand it?"

"That's nuthin'," he answered; "why, I just made believe that a bee was stingin' me. Bees don't hurry very much, you know. And I kept buzzin' because I was afraid I'd forget about it's being a bee if I didn't."—Christian Endeavor World.

* * *

Second Mating of Queens.—Prof. Cook has this to say on the question of queens mating a second time:

I have been an interested reader of what has been published of late by several writers of the several bee-papers, on the matter of second mating of queens. I do not believe that queens, effectively mated, mate again. They may mate and not be impregnated, when, of course, we should expect them to mate again, and on till real copulation or impregnation has occurred. We know how promptly queens, unless old, commence to lay in spring, and the drones do not come for some time. This (and observation for years) makes me skeptical in this matter. The reasons given are not conclusive to my mind. A. J. COOK.

* * *

In Love with One's Work.—"A man can do best that which he loves best. If he has started in a business which he can not learn to love, then he should go into some other business. He will never succeed in this age of competition unless he can find real pleasure in his work. The making of money is not a sufficient incentive. He must find his highest enjoyment in the task itself. No man who works along that line can fail. That is my judgment, based on my own experience and my observation. The one straight road to success is to learn to love your business. A man must love his business better than he loves anything else, if he would make success sure. It is the true, the only way."
—JAMES BUCHANAN DUKE.

Contributed Articles

The National Bee-Keepers' Convention at St. Louis.

BY C. P. DADANT.

A NUMBER of friends have been inquiring of me in regard to the arrangements for the next meeting of the National Bee-Keepers' Association. A brief statement is now being published by Mr. France, but for the benefit of those who feel interested, I will detail what was done in the matter.

The officers of the Association all live away from St. Louis—the president in Colorado, the vice-president in Illinois, the secretary in California, and the general manager in Wisconsin. I, therefore, felt compelled to take upon myself, as vice-president, the responsibility of making definite arrangements for the meeting.

As you remember, Mr. Editor, you sent me early in the season a letter from the Chief of Agriculture at the Louisiana Purchase Exposition, offering to furnish us a suitable hall for our meeting. To this I replied, thanking him for the offer, and promising to call upon him in July to perfect the arrangements. This I did, but the Chief was away. His clerks and managers very kindly showed me around. I found that their agricultural hall was engaged for the time of our meeting to another organization. Besides, this hall was in the main agricultural building, and in a very noisy spot. It would have been an inconvenient place for us. The managers of the Agricultural Building being unwilling to lose the opportunity of such a gathering as our Association promises, did all they could to find us another hall.

After a number of inquiries we found that the Hall of Congresses, situated in the north part of the grounds, was vacant for our date, and I was advised to call upon the Director of Congresses, Mr. Howard J. Rogers, to secure the building. But it is no small task to find an official in as busy a place as the St. Louis Universal Exposition. I was sent to the Administration Building, from there to the Education Building, and from there to the hall itself, without being able to meet him. I gave up the chase for that day, and satisfied myself that the hall was quite sufficient; in fact, rather too large, and far enough from the center to secure peacefulness and absence of noise.

The next day I resumed my search with as little success, and had almost given up catching up with my man, when one of the clerks in the Education Building hit upon the plan of finding him by 'phone. We did not find the Director, but his clerk, who very kindly booked us for the date set.

The next thing was to find a hotel not too far, nor too high in price. I visited some five or six. A friend in St. Louis, who accompanied me, took me to a very fine hostelry, but it seemed as if everything was too high. The hotels all counted on a large turn-out in September and October, and did not wish to bargain for a crowd at those dates, except at outrageous prices. Finally I found that the Christian Endeavor Hotel, on the south side of the grounds, and located outside, could accommodate us at $1.00 per day, European plan, and would furnish us a hall free. It is true the hall is open at the back, being only a temporary affair, but we were given the assurance that our welfare would be cared for, and that this hall would be made comfortable enough for our requirements. After reporting to Mr. France by letter, we informed this hotel that their offer was accepted, and the Fair management were notified that we would not use the Convention Hall.

I find that some of our friends are disappointed because the meeting is not to be within the grounds. Let them bear in mind that it costs 50 cents each time we go in the grounds, and it is out of the question to attend a bee-meeting regularly and visit the Fair at the same time. The days of our congress ought to be devoted to actual business and discussions of bee-interests. This will be done with the greatest facility in a quiet place. The Christian Endeavor Hotel is away from the noise, practically in the country, and there will be nothing to disturb us while our meetings are going on. I have attended meetings in halls where it was difficult to hear the voice of a speaker. I do not care to have such a meeting again, and I believe most of our bee-men will agree with me. The hotel is reached by Market street cars, west bound from Union Station. Its street address is 6600 Oakland Avenue. There is an entrance to the World's Fair just opposite the hotel, on the south side.

One more remark: Those of our friends who have not visited the Fair must bear in mind that those who made the map of the Fair have not followed the elementary law taught in the schools in regard to geography, that of placing north at the top of the map. The World's Exposition celebrating the Louisiana purchase has issued a map in which the north is at the foot of the map. The city of St. Louis is therefore at the left instead of the right. I mention this because it caused me quite a little annoyance until I found out what was wrong.

I have been hoping that we could secure a good attendance from foreign countries, but foreign bee-keepers, with very few exceptions, think that it is too far and too expensive to come to America for a bee-meeting. Our people go to Europe much more easily than the Europeans come here. Distance does not frighten us as it does them.

Canada is a part of us as far as our Association is concerned, since one of our directors is a Canadian, and so I hope to see a good delegation from there. I understand a young Russian bee-keeper has been prevailed upon to give us a talk. I hope others will come.

We are looking for the meeting to be the largest ever attended by bee-keepers in America. Our membership is now the largest of any bee-association in the world.

Hancock Co., Ill.

Proper Temperature for Brood-Rearing.

BY G. M. DOOLITTLE.

A CORRESPONDENT wishes me to tell him, through the columns of the American Bee Journal, what I consider the proper temperature for brood-rearing, closing with, "The same will be interesting to many readers beside myself". As I have seen very little on this subject, I will try to tell the readers a little of what I have learned about it as I have passed along.

In spring weather the capacity of a hive to retain warmth has much to do with prolific brood-rearing and the securing of bees in abundance in time for the honey harvest. The more heat we can retain in the hive the more honey we are likely to obtain through an increase of bees; and, further, the more honey we can save, for all are aware that the "fuel" that the bees "burn", so as to raise the temperature of the cluster to where it is necessary to rear brood successfully, is *honey*. Again, the more fuel (honey) the bees burn, the sooner their lives wear away, for it takes an effort, even on the part of the bee, to keep the "furnace" in the hive (the bees) heated, and filled with fuel as fast as it is consumed. Hence, we see the important bearing that a good, warm hive has in advancing our interests in the spring. Why do I say *in the spring?* Because at that season of the year the temperature outside the hive is very much lower than that which is required by the bees to rear brood, especially during the nights.

The above has been given as a sort of preparation for what is to follow, and with the hope that those who have been neglecting to look after their hives as to their being comfortable for the bees during spring, will not neglect them longer.

The correspondent asks me to tell what I "consider the proper temperature for brood-rearing". Any consideration of this subject would be vain, unless based on some knowledge regarding it, and that I might have some knowledge on this subject, I began, some years ago, to experiment as follows:

I procured a self-registering thermometer, and, placing it near the fire till it showed about 130 degrees of heat, I set the register, wrapped it in some heated cloths, and immediately placed it in the center of the brood-nest of a medium-sized colony. This was on a very cool day, somewhere about the middle of May. That night it froze quite a little, and the time was selected with the expectation of freezing during the night, as we often have such nights in this locality during the month of May. The next afternoon it had warmed up enough so that the bees were flying, when I took out the thermometer and found that the coldest point reached in the brood-nest during such a cold night was 92 degrees. Since then I have tried the same experiment several times, on both strong and weak colonies, although at no time since when it froze quite as hard as it did that night, and I have found that in no colony which was rearing brood successfully a less degree ever obtains.

Very strong colonies will be able to keep the temperature a little higher, generally up to from 94 to 96 degrees, during any time when they are making a business of rearing brood. Being satisfied that 92 degrees was the lowest point consistent with successful brood-rearing, I next went about finding what is the highest point the bees allow in their hive when the mercury is playing in the 90's in the shade.

Accordingly, one very warm day in August I placed the thermometer, early in the morning, in the center of the brood-nest of a very strong colony. This day gave promise of being a very warm one, it being 78 degrees in the shade soon after sunrise. At 2 o'clock that afternoon it was too warm to work out in the sun without danger to health, as from 93 to 98 degrees was the range of the mercury in the shade during the first half of the afternooon. The front of nearly every hive in the apiary was covered with bees, while hundreds were plying their wings at the entrance of every hive to keep the temperature as low as possible inside the same. At about sunset the thermometer was lifted from the hive, when I found that the highest point reached was 98 degrees, during that extremely warm afternoon.

Since then I have tried other similar experiments, but have never been able to secure a higher temperature, and generally it would be from a half degree to one or two lower. In this way I have kept experimenting till I am satisfied that, to rear brood successfully, the temperature inside the cluster of bees must reach a point somewhere between 92 and 98 degrees, and any arrangement of hives that will keep it as near those points as possible, with the least expenditure of effort on the part of the bees, would be the hive best suited to the needs of the bees, and consequently to the needs of the apiarist. Of course, this only applies to the brood-rearing part, and does not conflict in any way with the using of the proper frames and sections required.

The points we should look after are those of helping the bees to keep the hive and inside of the cluster *warm* in spring, and *cool* during the extreme heat of the summer months; and the *former* is more to the advantage of the bees and their keeper than the latter.

Onondaga Co., N. Y.

Convention Proceedings

Report of the Fourth Annual Meeting of the Texas State Bee-Keepers' Association, Held at College Station, Tex., July 5 to 8, 1904.

REPORTED BY LOUIS H. SCHOLL.

(Continued from page 600.)

W. H. Laws read the following paper on

THE SHALLOW, OR THE DIVISIBLE, OR THE REGULAR LANGSTROTH FRAME—WHICH?

The hive question is one that has never bothered my brain to any great extent, and my experience has been almost wholly confined to the regular Langstroth.

With it, in continual use for the past 18 years, and with handling from 100 to 1000 colonies, I have learned some of its disadvantages as well as some of its advantages.

It is a noticeable fact that those of our leading men who adopt a shallow hive never cease to extol its merits and remain its advocates.

Bulk comb honey is the chief product of the bee-men of our part of the State, and by all means we should adopt a hive that is best suited to the production of that article, and the great bulk of our honey is produced in this size of frame, very few using any other size of frame in the apiary but the regular Langstroth.

The objections that are most often raised against the standard Langstroth hive is that the depth of the frames is so great that it forbids the use of thin foundation, and also that it is difficult to get all the combs well sealed that we wish to cut and use in our bulk-comb product.

With these faults I notice that some of our bee-men have looked to a shallower hive with which to secure all well-sealed, white combs of honey built on thin foundation. Some looking for a standard have adopted the Ideal super, using it as a hive from the ground up. Notably our worthy secretary, Mr. Scholl, has this hive in extensive use, and reports that it is indeed an "Ideal" hive for the production of bulk comb as well as for section honey.

Were I to turn my forces to the production of one-pound sections of honey, I would surely adopt the Ideal hive and super, using two sections of it for a brood-nest, and on the approach of the honey-flow I would cut the brood-nest to one section, using the other section above the supers, or on some weaker colony run for extracted honey.

But for the production of extracted honey the Ideal frame is too shallow for rapid handling in the extracting-house. We can take honey faster from deeper combs, and in my opinion a frame that will measure seven inches deep, and as long as the Langstroth, is suited best to the needs of the bulk comb products, and that with the greatest ease and results. Such a hive is known as the "Acme."

W. H. LAWS.

L. Stachelhausen, that old veteran and user of the divisible brood-chamber, told how he used it for years and with the best of results. His hive is almost the same depth as that used by Mr. Scholl, or the Ideal depth, only that he uses a different kind of a frame. His is the same as the old style of Simplicity or all-wood frame, and he spaces it by means of corrugations in the rabbets upon which the frames hang. He prefers this kind of a frame because it gives freer communication between the top-bars, which is not the case with the shallow Hoffman frames as put out by the manufacturers.

With the wide top-bars it acts too much like a queen-excluder. This prevents the queen from passing freely from one case to another at times, and she will allow herself to be crowded in one of the shallow cases when there is enough laying room in the others either above or below. Therefore the wide top-bars are a disadvantage.

He can run more bees by using the divisible hive, as the manipulations are fewer. He can handle whole sections of frames while the bee-keeper with the deep frame is handling only frames.

Swarming can be controlled much more easily with this kind of hive, too, as the hive can be cut up in such a way at the right time as to knock swarming in the head. This can not be done with the Langstroth-frame hive. The frames are too deep for these manipulations. Then "shook" swarming can be practiced much more rapidly with such hives. Building up of colonies, or drawing brood from over-populous ones, can be done much more quickly and effectively, as a case is simply removed and the bees shaken out and the case set on another hive.

For the production of comb honey, both bulk comb and sections, such a hive is by far the best. Even for extracted honey this is the best hive. More honey can be taken with a shallow-frame hive than one using deep frames. Whereas single combs are taken out of a deep super, a whole case of ten shallow frames can be taken off. By smoking the bees down, taking off the case and then jouncing it up and down a few times it is ready to take into the honey-house from which the few remaining bees are left to escape through the honey-house escapes at the windows. This is by far the best way to run for extracted honey. Then when extracting it is easier to uncap the smaller ones, as they are more even and admit of one slice doing the whole side. And in extracting they are handled in pairs and replaced in the supers very rapidly.

They have many advantages over the deep frames, and a person does not know it until he has given them a thorough trial, and has convinced himself.

F. L. Aten gave his experience with the full-depth Langstroth hive and frame, never having used any other. He uses nine frames in a 10-frame body, and eight in the supers. He uses full-depth frames for the production of comb honey, and only starters, as he can not use thin foundation as it will tear down. He can not use thick foundation in full sheets as it will cause too much gob in the comb honey. However, he is an advocate of the deep frame, and thinks it the best and superior to the shallow frame hives.

Louis H. Scholl gave the convention some valuable facts concerning the divisible brood-chamber hive. He used the black-board, and showed the workings of this hive and management by illustration of facts. He has been more successful with this kind of hive than any other. When he started with it he tried only 20 of them, using no other than the regular shallow or Ideal super as put out by the supply dealers. In this a cheap hive is obtained, as it is of standard manufacture. They are nothing but the 5⅜ inch shallow extracting supers now on the market, and by using a series of them a good divisible brood-chamber hive can be obtained.

"As stated before, only a few were used at first with the intention of using them as supers on the regular Langstroth hives already in use, if found to be unsatisfactory. Instead of doing this, however, they proved so good, and the advantages were so much greater, that more were put into use, and as time goes on they will replace the deeper frame hives altogether in these yards.

"There is one thing to be remembered in discussing the merits or the advantages or disadvantages of such a hive. If you are going to use such a hive as you would manipulate a deep frame hive, then, and right there, you will lose sight of the real benefits to be derived from the use of a shallow hive. Unless you adopt the right kind of management that goes with the use of such a hive, you will never know anything about the merits of the shallow hive.

"It takes quite a different mode of handling bees in these hives from what it does in deep frame hives. Cases, and not frames, are handled in many of the manipulations in the apiary. This lessens the work materially, and it is such things that help in making money and profits for the bee-keeper. That is one of the main things that we are after. If we can make two dollars where we otherwise would make only one, it is to our benefit to investigate the matter and try to make as many of those two dollars as possible.

"Now for a few points on the management of this hive. Mr. Stachelhausen has already said much that I have practiced with my hive, and therefore I know that what he has said is all truth.

"Those fellows that hang onto their deep frames do not know what a good thing is, and they do not know that the divisible brood-chamber hive is a good thing until they have actually tried it. They are free to decry the things said in favor of the shallow hive, and yet they have never had one of these in use really to disprove these things by actual facts. Only those who have had actual experience can say whether one thing is better than another. If they have not tried them they are only theorizing. There is quite a deal of difference between theory and the real thing, sometimes.

"That the shallow hive is advantageous in many ways, those of experience have found out. Others who have tried them found them not so, perhaps for the reason that they did not use them rightly. We know of cases where this was so.

"Most of the bee-keepers are using shallow supers for comb honey. And many are using them exclusively for extracted honey, too. For tiering up and for many other reasons a shallow super is better. Foundation of a lighter weight can be used in them, for one good reason. Such foundation must be used for fancy comb honey.

"Then, when a shallower super is put on, the bees are not placed so far from the brood-nest, and that causes them to begin work in the supers earlier. Then the amount of room can be gauged better with the shallow super according to the honey-flow. Bees will fill a shallow super at times when they would not begin in a deep one.

"The manipulations of the brood-nest in the early spring, at swarming time, during the honey-flow, and, in fact, at all times of the year, are much more advantageous over the deeper-frame hives, and therefore allow of more being accomplished with less labor. This is a factor that should be considered well by every bee-keeper."

After a thorough discussion of this subject it was decided that a man convinced against his will is still unconvinced.

(Continued next week.)

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Honey Cosmetic.

Put in a cup the white of an egg, add a large spoonful of extracted honey, perfume to your taste, and mix thoroughly. Before going to bed, cover the face and hands with this cosmetic, which will whiten the skin, making it smooth and clean.

Use of Honey in Cooking.

I wonder if many of the sisters realize the importance of doing everything possible to increase the use of honey in cooking. If every family in the land should learn that for some things honey is far superior to sugar the difference of consumption would run up into the—well, let us stop and figure a little. Take the one item of honey-cookies alone. At our house we are very little given to the use of pie and cake, so we are not heavy consumers of honey-cookies, probably not using more than one batch a month, requiring a pound of honey in the making. I know of other families that would "get away" with such a batch once every week. But let us be very moderate, and allow each family to use for honey-cookies a pound of honey each month. They say there are some 80,000,000 people in this country and there must be a good many more than 8,000,000 families. If each one of these families puts into honey-cookies a pound of honey each month, that would make 8,000,000 pounds a month or 96,000,000 pounds a year. Forty-eight thousand tons! That's a good bit of honey, isn't it? Would help the market quite a little, wouldn't it?

Now, if each of the bee-keeping sisters will make a practice of making honey-cookies, using them in the family and putting them before their guests, others will be induced to follow the example. More than one who has sampled our cookies has wanted the recipe, and it will be the same elsewhere. It is nice to send a few such cookies to the pastor's family or to other friends, and that will help.

Now, that's only one item, and by no means all has been said that might be said. The matter lies largely in the hands of the sisters, not the brothers—although the brothers' mouths may help out. Let us push it.

Bee-Keeping Combined with Other Pursuits.

I have read with much interest lately the arguments of bee-keepers who favor the handling of apiaries as a specialty and an exclusive occupation and source of income. Although the other side of this important question has been lightly touched upon, there are doubtless very many who could say considerable if they wished, in defense of bee-keeping in connection with other business. Of course there are sections in our country where the pasturage is so assured and generous, and where the bee-keeper has facilities for handling outlying yards, that it pays well to make a specialty of the business. But the fact also remains that a larger percentage of apiaries, especially in the East, are so situated that, for one reason or another—take them year in and year out—they will not, if managed alone, afford an income sufficient to provide comfortably for a family; while if the apiary is in connection with other lucrative employments, it adds a substantial item to sales, especially on small farms.

In most of our Eastern States the honey-flow is very spasmodic, the pasturage in many sections supporting only about eighty colonies to the apiary, and the income varying from $100 to $500. As such a limited number of colonies requires only an occasional day's work in the yard, there is considerable time left for fruit-growing, poultry-raising, and other like pursuits.

Again, if bee-keeping goes hand in hand with other branches of husbandry, the general business of the farm will be sufficiently arduous to justify employing an assistant to bear the brunt of the hard work in the apiary also. This will enable a person who is not robust to run a small place comfortably and profitably, when otherwise life would be a painful struggle.

A little farm of three acres will accommodate a good bee-house and yard for 100 colonies; buildings, yards, etc., for 2,000 ducklings, as many chickens, 100 turkeys, and 1,000 or more pigeons; also a good vegetable garden, about thirty fine apple-trees, 1,000 choice currant bushes, grapes, raspberries and plums, and there will be considerable room for expansion.

The owner of such a little farm, with one helper the year around, and another during the busiest summer months, can keep every part of it in good, healthy, running order, and if the honey season is poor there are the other resources to fall back upon; if poultry fails the honey crop will probably be good.

Another advantage in mixed farming is that the proprietor of a hotel or a family purchasing one item of you is quite likely to take the others, a market thus being established for the entire farm product. Also in advertising stock there is a decided gain in having three or four first-class products for sale.

There are few moderate-sized poultry farms that cannot also run an apiary with good results; and very many of our bee-keepers who have small apiaries can double their income and comfort by adding to them the raising of poultry and small fruits. FRANCES ELLEN WHEELER.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

PROPER SPACING OF BROOD-FRAMES.

The expert opinion on the proper spacing of combs is eleven for 1⅜ inches, eight for 1½ inches, two for 1 and 7-16; and just one thinks he would like 1¼. Two pretty decidedly don't care. Only two confess any inclination to change, both in the direction of closer spacing. Sorry it came out exactly so. Where combs are continually manipulated in a hive in which bees are not very plenty, close spacing comes easy, so it does where there is practically no manipulation at all; but it looks to me that a man who wishes to handle over his combs a few times in the course of the season—colonies strong some of the time—will do it easier with the widest spacing. Page 517.

BEES IN SUPERS—WHITENESS IN HONEY.

S. T. Pettit will think I'm queer, but I doubt if he can abate much the inclination of bees to crowd into the center of a super. Even if he puts a thin septum below and makes all the bees go up front, rear and sides, I should doubt still. Bees don't seem to regard a thin septum *if it is entirely surrounded with bees.* They know where the center of things below is, and as a matter of preference prefer to be exactly over it. In cool weather there would be a gain in throwing more warmth into the outside sections.

And here's a sentence of his that bears repeating well: "We should not lose sight of the fact that bee-keepers are, without any profit to themselves or their patrons, educating the public to demand what they do not adequately pay for." Page 518.

BALLING QUEENS—SENSE OF SMELL IN BEES.

I think Miss Wilson is wrong in assuming that Sister "Colorado's" queen was balled to protect her. Bees with all their wisdom don't know enough to recognize their own mother if a foreign scent is upon her. That startling smell, originating with the fingers of that "critter" that had touched their queen, was what did the business. Sure, their queen never smelt that way. If the daintiest cheek were pressed for a little while with an onion, or a tomato leaf, the chap meditating a kiss—well, the scoundrel would "kiss and tell." He would tell how it smelt and tasted. It's plain that bees vie with dogs as to the amazing delicacy of their sense of smell. The nicest, cleanliest fingers are to the bee more than an onion is to a human being. Page 520.

KNOWING AND "DON'T-KNOWING".

The little boy's dog that used to be older—being a genuine incident—is an instructive one. How much children know—and at the same time how little they know! Rest of us in the same predicament. In medicine, in chemistry, in religion, in other things, an examiner with all wisdom in possession would surely catch any one of us on here and there a point where we are equally unable to see the utter un-verity of assertions and dogmas. Our alleged wisdom contradicts itself; but we can't see the contradiction. Page 533.

BEE-TENTS AND THEIR CONSTRUCTION.

John Newton's bee-tent on the front of No. 31 is worth talking of. The double arrangement of curtain for doorway seems to be excellent. The fly-open top, if in practice it doesn't gape open and let bees pass, would be nice, I guess. The screen-wire windows are all right. Don't think of such a thing as getting into a tent that you can't see out of and see what is going on outside. If you need a tent at all it is a good one that you need—and perhaps a flounce at the bottom, with pebbles sewed in the edge to make it hug the ground, might be suggested. But when one uses a tent only when he has to use it, it may be that that point almost never comes. Then, perchance, his tent gets out of order and stays so. That's me. Kind o' suspect that I'm in the majority, too—how is that? My last tent the squirrels and mice took all the cover off it for nests.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Heartsease, Ironweed and Bergamot.

I enclose the blooms of 3 common weeds or flowers, which are very plentiful here. I would like to have you tell me their names and their value as honey-plants. IOWA.

ANSWER.—No. 1 is heartsease, one of the great honey-producers. No. 2 is ironweed, of no great value in this vicinity, although it may be better with you. No. 3 is bergamot, one of the mint family, and of considerable value.

Afterswarm Going with Queen When Mating.

Does an afterswarm always go out with the queen on her wedding-trip? My neighbor says that Prof. Cook says that they do. I doubt this very much. NEBRASKA.

ANSWER.—I have looked with some care through Prof. Cook's book without finding any definite statement on the subject, although something may have escaped my notice. It is not likely that he will say anything contradicting the general belief that the swarm sometimes accompanies the queen on her wedding flight, but not generally.

Bees Hanging Out.

What causes the bees to hang out of the hives on these hot days. Haven't they enough ventilation? I suppose it is too hot for them. I have them under shade-trees in Langstroth hives. MISSOURI.

ANSWER.—Bees that hang out when storing is going on rapidly need attention. They may need ventilation, and it may be that they need more room. But if there is nothing for them to do in the fields, and all the field-bees are staying idly at home, their hanging out is no sign of anything wrong.

Doubling Up Colonies for Wintering.

I have 50 colonies of bees. I will sell what I can of them, and double up the rest so that I will have about 30 to winter. I use Danzenbaker hives, and will double by placing one hive on top of another.

1. Will it do to let them remain in that way all winter? or after the bees have been united would it be better to keep them in one hive, and put the other away?

2. If there is only enough honey in the two hives scattered through all the combs to winter the bees, how can I proceed to have it condensed in the one hive, if your answer to question 1 be to remove one of the hives? OHIO.

ANSWERS.—1. If the colonies are strong, as of necessity they will no doubt be, it will probably be as well or better to leave them the two stories, especially as the frames are shallow.

2. If you should prefer to reduce them to one story, there will be no great difficulty in getting into one story the most of the honey, or at least all that will be desirable. A little before the queen stops laying, put into the lower story the heaviest frames of honey, with one frame of brood, putting the rest in the upper story with an excluder between. Three weeks later remove the upper story, of course brushing back all the bees. Or, without any preliminary work, when brood-rearing has about ceased, but while bees are still flying freely, take away one story, and mass in the other the combs having most honey.

Very likely you may ask what's best to do with the combs removed. Keep them in the cellar, and you will find it a nice thing to have them ready for use next spring. It will be well, however, to give them a week or two of freezing weather so as to kill any worms that may be present. If no other bees are near, you can do another way: Set these hives with their contents several rods from the apiary with entrance large enough for only one or two bees at a time, and let the bees rob them out.

I thank you for your kind words.

Profit and Loss in Keeping Bees.

1. How much profit would a single colony bring in a season? If the profit is small, can one person take care of many colonies?

2. Is it possible that a complete failure could be the result of a season's work? NEBRASKA.

ANSWERS.—1. A single colony in a season may produce all the way from nothing to 500 pounds of honey or more. One person might without any help take care of enough colonies to make a living by it, but such cases are very rare. To do so, one needs to know the business thoroughly, after years of experience, and the few who make a business of bee-keeping exclusively generally hire more or less help. The great majority of bee-keepers have some other business besides bee-keeping.

2. Yes, there are seasons when bees not only produce no surplus but have to be fed to keep them from starving.

Moths in the Hive.

The moths are in my hives. Please tell me how to get rid of them. ILLINOIS.

ANSWER.—Keep your colonies strong, and the bees will take care of the worms without any help from you. It will help greatly to get in Italian blood, for Italians are much better than blacks at keeping out the moth. In the meantime, you can help the bees to clean them out in this way: Take out the combs one by one and look for the galleries of the worms in the sealed brood. Take a wire-nail or other pointed thing and tear open the gallery a little at one end. Then start at the other end and follow it up till the worm hustles out, when you can dispatch his wormship in any way that suits your taste.

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FROM MANY FIELDS

Bees Did Pretty Well.

The bees have treated us pretty well this season, though it takes lots of drumming to sell honey at a "live and let live" price. However, I hope to be able to "drum" enough out of it to go to St. Louis to the convention.

F. W. HALL.

Sioux Co., Iowa, Aug. 23.

Laws for Bee-Keepers—Correction.

On page 573 there is either a misprint, or else I made a blunder. I intended to say that I had no friendly feeling for those bee-keepers who knowingly keep bees diseased with foul brood, or who report through the press that bee-keepers manufacture comb honey, and fill and cap it over. Nor for that class of people who adulterate honey by combining it with glucose, then label and sell it for pure honey. I do not wish to be misunderstood concerning matters of this kind, for in most parts of the country foul brood can be stamped out. Ignorant and malicious falsifiers can be exposed, and adulterators of honey can be punished by law. If we, the bee-keepers of the country, will only make a united effort in each State by applying to the legislature for an effective law, we would be but asking for justice to ourselves as well as the masses who purchase and consume honey.

Rice Co., Kan. DR. G. BOHRER.

Results of the Season.

I secured 1800 pounds of extracted clover honey from 17 colonies, and 60 pounds of comb honey from one colony. I got nothing from the basswood bloom, as the weather was too hot in the daytime, and the nights were too cool.

CHAS. J. DAPPEL.

Ozaukee Co., Wis., Aug. 18.

Good Honey Crop—Swarming.

In my report of July 30, page 574, there is an error in the amount of honey taken off at that time. If I said sections I meant supers. Since that time I have taken off 10 more supers.

I have 61 sections on at present, and if conditions hold out I think they will be ready to come off at the end of the month, when I intend taking all the supers off, and give the colonies a chance to store for winter supplies.

We have had all kinds of weather the last week—extremely hot by spells. The bees are doing fairly well. I will report the result of the honey harvest for the season later on. Up to this time the bees have gone away beyond my expectations in the amount of honey stored.

I had no swarming for more than a month. I hived the prime swarms by caging the clipped queen and setting the hive on the parent stand, moving the parent colony to a new stand, marking it, and in eight days cut out the queen-cells. If none were hatched I cut out all but the largest and marked it O. K. Eight days from that time I

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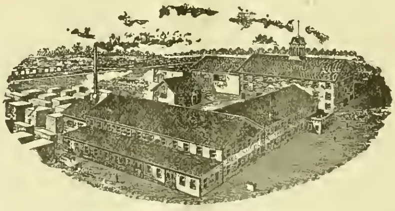

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looked for the queen or eggs, then left them alone, except where I thought the queen had been lost. Then I examined again to make sure of the queen, and if they had no queen I gave queen-cells to the afterswarms. I hived them in hiving boxes, set them away in a cool place, cut out the queen-cells, and returned in the evening. There were none that swarmed out again, but they settled down to business.

My yard is well sheltered, and I give large hive-entrances. I see to it that each colony has an abundance of room, and in extremely hot weather I raise the covers over the strong colonies, and where the supers are tiered up three or four high.

If I have no more swarms from now on I shall adopt this plan in the future.

Mr. Blunk and I are going to try those rear-end feeders, and have written to a manufacturer about making some for us. I think they are ahead of anything of the kind in the market.

W. IRVINE, SR.

Webster Co., Iowa, Aug. 22.

Honey Crop Not Good.

The honey crop will not be good in this locality, owing to the extreme dry weather. Bees will hardly store enough honey for winter use.

MIKE D. MOHR.

Rock Island Co., Ill., Aug. 17.

Wintering Bees—Brace-Combs.

The picture shown on page 497 was taken when my bees were wintered on the summer stands. The barrels were used as outside cases to hold the shavings. The square boxes, shingle-roofed and composed of shingles, were used for the same purpose, and answered well.

The barrels and boxes were abandoned after a few winters, and the bees are now wintered with much less trouble in my bee-cellar.

An inquirer would probably wonder how an ordinary sugar-barrel could be put over a bee-hive. My hives are 12 inches square, and a headless sugar-barrel drops easily over, leaving abundant room for excelsior or chaff-packing. These covers were used summer and winter. Now I use a board a little over a foot square, covered with tin, and laid on top of the hives. It is very easy to handle, and answers very well in the summer, but a box would probably be better in the spring. I have a canvas cover that I have used on the sides below the tin cover, but it gets thin and fails in about 3 seasons.

As my hives are constructed and

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have been used for cellar wintering the outside case seems superfluous. Of course, one cannot tell, without an extensive experiment, whether bees taken from the cellar when soft maple is in bloom need more protection than the thin hives afford. I have had no trouble with mine. They breed up well and do as well as my neighbors' bees.

I think my experience has solved the much-talked-of brace-comb problem. Brace-combs cannot be found in the 300 hives I have used for 5 years. They have never been cleaned, and have been used for section honey every season. All my honey is stored in the *inside* of the frames and in the *inside* of sections. T. F. BINGHAM.

Clare Co., Mich., Aug. 29.

Long Winter Confinement—Season a Failure.

I notice some of the correspondents think they have kept bees in confinement a long time, and I have been waiting to see if some one would get up near to high-water mark, but fearing some one will get ahead of me and I cannot report the longest time, I will tell my story now.

L. F. Sheldon put his bees in the cellar Nov. 24, 1903, and in putting them out missed one colony. He found it later and put it out June 19, 1904, in very fair condition. It did not swarm or store any surplus honey. I telephoned to Mr. Sheldon just before writing this, to make sure about dates, and what Mr. Sheldon says can be relied upon.

The honey season has come and gone, and nothing to show for it but lots of light swarms and about 500 pounds of honey. Never was the prospect better than the forepart of June. The colonies were sending off large swarms, and every little basswood tree and larger one was loaded. The ground was white with clover, from which I never saw the bees gather honey until this season. They worked about 3 days on the first blossoms, but there hasn't been a bee on it since.

I could stand in my yard and see the basswood trees in full blossom all over the hills. There were not as many bees moving in my yard, as there should have been from 3 colonies, and all this time the farmers were telling

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Extra Tested Breeding Queens and my new book on "Queen-Rearing," $1.50. Catalog and a small booklet on queen-rearing sent free.

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24A48t No. 75. Birmingham, Alabama.

Some Good Clubbing Offers.

A good many subscriptions to the American Bee Journal should be renewed at once. We wish to call special attention to the following, which we are sure will commend themselves to many of our readers:

No. 1—	The Bee Journal and Dr. Miller's "Forty Years Among the Bees" (book alone, $1.00)	**Both for $1.75**
No. 2—	The Bee Journal a year and Prof. Cook's "Bee-Keeper's Guide," (book alone, $1.20)	" 2.00
No. 3—	The Bee Journal a year and Dadant's "Langstroth on the Honey-Bee," (book alone, $1.20)	" 2.00
No. 4—	The Bee Journal a year and Doolittle's "Scientific Queen-Rearing," (cloth bound) (book alone, $1.00)	" 1.75
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No. 7—	The Bee Journal a year and a "Novelty Pocket-Knife" with your name and address on it (knife alone, $1.25)	" 2.00
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No. 9—	The Bee Journal a year and an "Emerson Binder," (stiff board) (binder alone, 60c)	" 1.40
No. 10—	The Bee Journal a year and a Monette "Queen-Clipping Device," (device alone, 25c)	" 1.10
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No. 12—	The Bee Journal a year and Newman's "Bees and Honey," (paper bound)	" 1.10
No. 13—	The Bee Journal a year and Root's "A B C of Bee-Culture," (book alone, $1.20)	" 2.00
No. 14—	The Bee Journal a year and a Foster Stylographic Pen (Pen alone, $1.00)	" 1.75

Send all orders to GEORGE W. YORK & CO.,

me that the hills were a-roar with my bees. I could not understand what all this meant, so I started for the hills, and what a sight I beheld! I don't know how bumble-bees are marketed, by the hundredweight or by the bushel, but I will call it by the bushel. Every tree of any size had on it I should think a half bushel of bumble-bees, all trying to get at the blossoms. They would hit one against the other, and some would fall to the ground. I thought then I would cross my bees with the bumble-bees, but later I was told by those working in the hay-fields that they had found millions of nests but not one bit of honey. No honey-bee could have lived to get any honey from those blossoms. The weather was nice all the time they were in blossom, with sprinkles of rain almost every day. Our own best honey-producing plant—the blue thistle—was nearly all killed out last winter.

C. M. LINCOLN.
Bennington Co., Vt., July 25.

Too Dry for a Good Honey Crop.

It was too dry here during June and July, so the honey crop in this locality will be small, but the bees and the American Bee Journal are so interesting that I feel that I am more than paid for the time spent with both.

I have 20 or 30 sections of honey which I believe is almost pure catnip.

I. V. WINTER.
Kane Co., Ill., Aug. 29.

Swarm Issuing with no Eggs in the Queen-Cells.

On page 499 in the American Bee Journal I notice you seem to doubt whether a swarm ever issues inside of 8 days after the first egg is laid in a queen-cell.

I had one swarm issue June 24 this year, without even so much as an egg in a queen-cell.

The colony was not interfered with, and had considerable room to work. This swarm acted rather queer. It was hived on the returning plan (the queen's wings were clipped). I placed one comb partly filled with brood in the hive to catch the first pollen, and 9 frames of foundation, and on top of this I placed the super from the old colony. In a few minutes the swarm returned nicely as usual, but the bees were not all in the hive yet when some of them started out again. They were scarcely all out when they started back in (I having caught the queen and returned her with them both times). When most of the swarm was in they started out again as before, but this time the queen remained in the hive.

I removed the comb of brood which I

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QUEENS!

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Select	$ .75	$ 4.00	$ 7 00
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Quirin-the-Queen-Breeder

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" Selected "	1.10
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Bee-Keepers' Supplies.
Write for low prices and catalog.
AUG. LOTZ & SON,
24A17t CADOTT, WIS.

had placed in the hive and they returned the third time, but this time they stayed and went to work nicely.

The colony in question had a number of queen-cells started, but I am very positive not one of them had even an egg in it.

Two years ago I had a prime swarm issue from a colony about June 1, and just 16 days later the first afterswarm, so I should think it must have been a case nearly like the above. I also examined this colony after giving the second swarm, and found one young queen just ready to come out of the cell, and another cell about ready to hatch.

F. J. STRITTMATTER.

Cambria Co., Pa.

Encouraging Report.

We have had some fine rains. All sorts of fall flowers are blooming. Queen-rearing is going along smoothly. The outlook is for a late flow, if frost does not cut the bloom.

H. G. QUIRIN.

Huron Co., Ohio, Aug. 24.

Grasshoppers Injure the Honey Crop

We have harvested 18,000 pounds to date, from 700 colonies. Grasshoppers and blasted alfalfa blossoms explains the light crop. E. F. ATWATER.

Ada Co., Idaho, Aug. 22.

King-Birds—Enemies or Friends?

The article by "Clover Blossom", in defense of the king-bird, is quite misleading and erroneous—at least so far as these birds are concerned about here. He says it is "a harmless bird, which is actually our friend." (Page 551.) And then follow two quotations, one from Chapman's Bird Life, and one from Farmer's Bulletin No. 54. In both these cases evidence that the king-bird is not a bee-eater is looked for in the wrong place, namely, the stomach. Now, king-birds or bee-martins might be examined by experts by the thousand, and no evidence of their bee-eating proclivities be discovered in their stomachs, as they rarely, if ever, swallow the bees that they catch. I shot 11 of these birds in 1903, and so far 8 this year, and I intend to shoot every one that I see anywhere near my apiary.

After reading that article I determined to give the bee-martins one more chance, as there happened to be two—one old bird and one young one—that I had been "laying for," and had not managed to get a shot at, as they would fly away as soon as they saw me approaching. However, I knew their favorite perches while catching bees, so I determined to watch them from a safe distance, and see what, if any, damage they did. At night I cut the grass short under their perches and sprinkled the ground with sawdust, and next day sat at a window in my house close to the apiary with a pair of opera-glasses to keep watch. The following was the result:

August 12—10 a.m., old king-bird catching bees, seen distinctly through glasses—53 bees caught in 40 minutes, and in 67 flights. Found remains of 50 bees below perch. 10:50 a.m., young king-bird, 27 bees caught in 40 minutes in 54 flights—25 remains of bees found.

August 13—3 p.m., old bird, 61 bees

TENNESSEE QUEENS

Daughters of Select Imported Italian, Select Long-Tongue (Moore's), and Select Golden, bred 3¼ miles apart, and mated to Select Drones. No impure bees within 3 miles, and but few within 5 miles. No disease; 31 years' experience. All mismated queens replaced free. Safe arrival guaranteed.

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Langstroth on the Honey-Bee
Revised by Dadant—Latest Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

The book we mail for $1.20, or club it with the American Bee Journal for one year—both for $2.00; or, we will mail it as a premium for sending us THREE NEW subscribers to the Bee Journal for one year, with $3.00.

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About 50 colonies of Italians and Hybrids, with young and prolific queens, in 8-frame hives. Will sell, to reduce my number, at $4.50 each; 5 or more, $4.25 each. Address,

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Queens FOR THE FALL TRADE! You will need them in order to have strong, vigorous colonies next spring. We want to sell them to you. Tested, $1; 6 for $5. Untested, 75c; 5 for $3.25; 10 for $6; 15 for $8.25; 25 for $12.50; 50 for $23.50; 100 for $45. Give us your order. We guarantee safe arrival. Address,

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caught in 45 minutes, in 70 flights—58 remains found. 4 p m., young bird, 50 bees caught in 60 minutes, and in 58 flights—50 remains found.

August 14—12 noon, old bird, 58 bees caught in 60 minutes, 75 flights—57 remains found. 2 p.m., young bird, 47 bees caught in 60 minutes, and 57 flights—46 remains found.

August 15—10:30 a.m., young bird shot and killed. 12:10 p.m., old bird shot and killed.

In all the cases above, immediately after my watch was over, I went to the birds' perches, and in every instance found about the same number of remains of bitten-up bees on the ground as I had seen them catch, some of the bees being much less mangled than others.

Some people say that even if these birds do eat bees, the loss of the few they eat amounts to nothing. I can not agree with them. even if these birds never caught a queen, which I have no doubt they do. Had I not used my shotgun I should have had eight of them preying on my bees this year, and even if no single bird ever caught bees for more than an hour at a time in each day, my loss would have been about 450 bees a day, 3150 a week, or about 378,000 for the entire period that these birds remain here during the summer.

"Clover Blossom" concludes his remarks on these birds with this sentence: "Be very careful not to mistake your friends for your enemies", and while endorsing that sentiment, I would conclude this article with: And be doubly careful not to mistake your enemies for your friends.

"A BEE-KEEPER IN VIRGINIA."
Augusta Co., Va., Aug. 16.

WANTED — COME HONEY, WHOLESALE.— Will buy your crop outright, cash at your depot anywhere in the U. S., if price and quality are right. We have salesmen in nearly every market in U. S., but buy only through Thos. J. Stanley, Manzanola, Colo., our honeyman who spends the season in the West superintending our apiaries and looking after Western car-lots of honey. Address us there direct, stating what your honey is gathered from, what grade, the average weight of section, how packed, color, etc.; quantity, when you can deliver, and lowest cash price per pound properly crated and delivered to your depot. Would like to know about what the freight rate to your nearest city. We believe that our purchases are larger than any other firm or association. Yours for business, **THOS. C. STANLEY & SON,**
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CONVENTION NOTICES.

National at St. Louis.—The annual session of the National Bee-Keepers' Association for 1904 will be held in September, at St. Louis, Mo.

Sept. 27 and 28 will be devoted to Association work and its interests. We expect many prominent foreign bee-keepers to be present on these days.

Sept. 29, National Day.

Sept. 30, Inspectors' Day. Twenty bee-inspectors from all over the United States and Canada are counted on to introduce and discuss "The Diseases of Bees," etc.

Mr. N. E. France will exhibit, in the Convention Hall, a large map of the United States, Canada, Cuba and Europe. Each State and Country will have a shelf attached to the map with a one-pound sample of each kind of honey produced. Many other exhibits of special interest will be shown.

We expect to see the largest gathering of bee-keepers ever held in this country. A more detailed program will appear later.

GEO. W. BRODBECK, Sec.
Los Angeles, Calif.

Missouri.—The Missouri State Bee-Keepers' Association will meet Sept. 26, in St. Louis, in the same hall to be used by the National Bee-Keepers' Association. Further particulars later. Arrangements are being made for our accommodation by C. P. Dadant, in connection with the National Association.

Wakenda, Mo. W. T. CARY, Sec.

Wanted.—The Western Illinois Bee-Keepers' Association will meet in the Court House at Galesburg, Ill., Tuesday, Sept. 20. All who are interested in bees are cordially invited to attend. The convention will begin at 9 o'clock a.m., and last all day. E. D. WOODS, Sec.
J. E. JOHNSON, Pres.

Illinois.—The Western Illinois Bee-Keepers' Association will meet in Galesburg, Ill., Tuesday, Sept. 20, in the County court-room. All bee-keepers in the vicinity are invited to attend.

Galesburg, Ill. E. D. WOODS, Sec.

New York.—The Fulton and Montgomery Counties Bee-Keepers' Society will hold their next meeting at the Central Hotel. Market St., Amsterdam, N. Y., on Tuesday, Sept. 20, 1904, at 10 a.m. All who feel interested in bees or honey are cordially invited to be present.

West Galway, N. Y. T. I. DUGDALE, Sec.

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HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, Aug. 18.—Some new honey is on sale; No. 1 to fancy white comb brings 12@13c; so far the demand is of a slow nature. Extracted, good supply, and white grades sell at 6@7c; amber, 5@6c, according to kind, quality, flavor and package. Beeswax, 28c.

R. A. BURNETT & Co.

CINCINNATI, O., Aug. 19.—The tone of the comb honey of this year's stock is becoming stiffer, producers claiming it to be not so plentiful and therefore ask higher prices. I quote fancy white comb honey from 15@15½c.

Extracted is showing no change. Amber, in barrels, 5¼@5½c; in cans, ½c higher; water-white alfalfa in cans, 6½c; fancy white clover, in barrels, 6½@8c. Beeswax more plentiful, brings 28c per pound. C. H. W. WEBER.

BOSTON, Aug. 20.—The honey market is in a very unsettled condition; or, rather, we might say that the absence of any demand practically makes no market. As a general thing, we do not look to see a demand until from the middle of September to the first of October. By this time, cooler weather creates a certain demand. Prices at this time are, therefore, practically normal. The very finest thing is bringing 16c and from that down. Stocks are coming in very slowly, but that is to be expected at this time.

BLAKE, SCOTT & LEE.

NEW YORK, Aug. 19.—A few lots of new comb honey have arrived, but not enough to establish a fixed price in quantity lots. We do not expect large receipts before the second week in September, and will not be able to give definite quotations until that time. Extracted honey is in fairly good demand at unchanged prices.

Beeswax dull and declining. Market price being now 27@28c. HILDRETH & SEGELKEN.

KANSAS CITY, Aug. 30.—With cooler weather, the demand for honey is slowly increasing, and prices are firm, as follows: Fancy white comb honey, $3 00 per case; amber and darker shades, $2.25 to $2.50. White extracted, per pound, 7 cents. Beeswax, per pound, 30c; good demand. C. C. CLEMONS & Co.

CINCINNATI, July 15.—The supply of honey at the present time is limited, with but moderate demand. New honey is beginning to arrive. We quote our market to-day as follows: Amber extracted in barrels and cans, 5¼@6½c; white clover, 6½@8c. Comb honey (demand limited), 13@14c for fancy and No. 1. Beeswax, 29c. THE FRED W. MUTH Co.

ALBANY, N. Y., Aug. 25.—Honey demand improving some now. Receipts of new crop are light as yet, but we hear of quite liberal offerings at country points, indicating lower prices later when the "behind time" fellows get their crop ready. We quote fancy white, 16@17c; A No. 1, 15c: No. 1, 14c; mixed and buckwheat, 12@14c. Extracted, white, 7@7½c; buckwheat and mixed, 6@6½c. H. R. WRIGHT.

PHILADELPHIA, Aug. 10.—Some comb honey has been arriving in this market the last week, but hardly enough to fix the market price. Everything depends on the crop, which is still uncertain. Some few sales made of fancy comb at 16@17c; No. 1, 14@15c. Extracted honey arriving freely and selling at 7@8c for fancy white and 6@7c for light amber. Beeswax, 26c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

SAN FRANCISCO, Aug. 17.—White comb, 1-lb. sections, 12½@13c; amber, 9@11c. Extracted, white, 5½@6c; light amber, 5@5½c; amber, 4@4½c; dark amber, 3¼@3¾c. Beeswax, good to choice, light, 28@30c; dark, 26@27½c.

The first noteworthy shipment by sea for some time was made the current week, a steamer taking 200 cases extracted for Germany. Market for amber grades is without special firmness, but tendency on water-white honey is to better average prices than have been prevailing the past season.

WANTED
Fancy Comb Honey from White Clover,
in no-drip cases. at once. State your lowest price for SPOT CASH, the average weight of honey per comb, all definite and final in first letter. We answer mail and pay for goods promptly. Plenty of references if desired.
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ST. LOUIS, 1904.

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3 Tested Queens	3.00
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3 " " Queens	4.00
Select Tested Queen, last year's rearing,	2.50
Extra selected breeding, the very best	5.00

Circular free, giving particulars regarding each class of Queens, conditions, etc. Address,

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27th Year **Dadant's Foundation** 27th Year

We Guarantee Satisfaction. What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS. PATENT WEED-PROCESS SHEETING.

Why does it sell so well? Because it has always given better satisfaction than any other. Because in 26 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material.
We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies
OF ALL KINDS.

Langstroth on the Honey-Bee—Revised
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

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National Bee-Keepers' Convention, St. Louis—Sept. 27-30

AMERICAN BEE JOURNAL

WEEKLY—$1.00 A YEAR.
Published by GEORGE W. YORK & CO., 334 Dearborn Street.

44th Year. CHICAGO, ILL., SEPT. 15, 1904. No. 37.

MR. PHILIP PRIOR AND DAUGHTER IN HIS APIARY.

APIARY OF A. J. FREEMAN, OF NEOSHO CO., KAN.

(See page 628.)

APIARY OF T. R. G. WELCH, OF MORGAN CO., UTAH.

7%

We believe that every reader of the American Bee Journal is open to reason. That every one will make his decision without prejudice.

Why do we give a discount? Like all other questions this one has two sides. **Your** side and **ours.** To clear the matter a little we will first tell why we give a discount, and then will try to explain why you should take advantage of it.

Almost every business has a rush season and a dull one. To make the conditions balance is a never-ending problem.

Roughly speaking our busy season lasts 6 months of a year and the dull season the balance. To keep from running at a loss during the dull season is what taxes our strength. One expense, for example, is a pay roll of 250 helpers which must be met and it does not decrease much during these months. This is not the only item by any means nor do these expenses apply to ourselves only, but to every branch house and agent that sell our goods. This is why we are anxious for business during this season. And to obtain these orders is why we give discounts. September is the dullest month, and when we make our best offer.

What is the advantage of buying supplies before you need them? This is the bee-keeper's side of the question.

One of the advantages is our discounts. Just for convenience we will assume that **$100.00** will cover your requirements for supplies. You don't **need** them before April 1. We will suppose that you have the money and buy your supplies this month. You receive as a rebate $7.00. Your money in the bank for 6 months at 4 percent would bring $2.00. Thus you have a clear $5.00 to your credit. If you have to borrow money you can figure in a minute what you earn. Can you place your money where it will bring larger returns? Seven percent for 6 months is 14 percent for one year. The last figure is more than the profits of an average business firm. A **good** farmer nets no more. How can the bee-keeper afford to miss it?

Aside from the mere discount there are many other savings to be considered.

Are you working all winter? Like ourselves you find it best to keep busy during the slack season. Your time can be used to an advantage then in nailing and painting your hives and making ready your supers. Why not do it? Then there is always an advantage in being prepared. Very few are successful otherwise. For lack of forethought you may lose your crop or swarms for want of supers and hives. Have you ever been vexed by not receiving your supplies when they are needed? Why repeat the experience?

It is a positive fact that the majority of bee-keepers do not give their bees the attention that their possible profits warrant.

The larger number of bee-keepers take the profits from their bees as being mere luck. This is why so many put off ordering supplies to the last minute and run the risk of failure. Make your bees pay by giving them intelligent thought and attention. In the last number of the **American Bee Journal** you will find complete details regarding our discounts. It's costly to put off what you can do to-day.

THE A. I. ROOT COMPANY,

Factory and Executive Office: MEDINA, OHIO.

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AND MANY AGENTS.

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GEORGE W. YORK, Editor. CHICAGO, ILL., SEPT. 15, 1904. Vol. XLIV—No. 37.

Editorial Comments

The National Convention at St. Louis.

In two weeks the 35th annual convention of the National Bee-Keepers' Association will be in session at the Christian Endeavor Hotel in St. Louis. It begins Sept. 27th. It should be the largest meeting of bee-keepers ever held in this country. Why not make it a grand reunion? It's a good thing for those who are engaged in the same line of work to meet and compare experiences. In so doing greater progress can be made by all.

Better arrange to attend the St. Louis convention, and help to make it a big success.

Apiarian Exhibits at Fairs.

These can be made of much interest to the Fair visitors, and of no little profit to those who make the exhibits of bees, honey, and the various implements and methods employed in modern apiculture. It is one of the best ways to aid in educating the public concerning pure honey and its production. And if proper efforts are put forth with those who manage the Fairs, usually generous premiums will be offered.

But even if the premiums are not so liberal as they should be, every such opportunity should be embraced by bee-keepers to place before the consumers all the information possible about bee-keeping, and the ways in which pure honey is produced, so that an increased demand may result.

By all means, bee-keepers should take advantage of the Fair privileges extended to them, and utilize such to the mutual benefit of both themselves and the consuming public.

The Honey Crop for 1904.

A final report, or resume of reports, appears in Gleanings in Bee-Culture for Sept. 1, in the following paragraph:

> Regarding the amount of honey produced this year, the accumulated evidence that has come in from various sources seems to show quite clearly now that the aggregate of honey this season *is much less than last*. In a way, this may be a blessing in disguise, considering the large amount of comb and extracted honey carried over from last season. If we had had a crop as heavy as last year, the market might have suffered a total collapse from which it might not have entirely recovered. "There is no great loss without some small gain" is an old adage that may possibly be true in this case.

So far as we have been able to learn, although the honey crop is less in quantity this year than last, prices are not as yet much if any higher. Here in Chicago the demand has hardly begun. But we think a little later it will revive, and that there will be a good call for honey.

We think it will take a little time to recover from the depressed prices that prevailed last year, when there was such an enormous crop of honey in the central portion of our country. Especially was this felt in Chicago, where the market was fairly flooded with the finest qualities. Still, ordinarily Chicago uses lots of honey, and in a few weeks we believe the demand will be normal again, if not greater than ever before.

Bogus Comb Honey and the Ladies' Home Journal.

As a sequel to the paragraph in the June number of the Ladies' Home Journal, mentioned on page 403 of this journal, appears the following in Dr. Walker's department of the September number of the Ladies' Home Journal:

> ATRIFICIAL PARAFFIN HONEYCOMB.
>
> Since making the statement in this department in the June Journal concerning paraffin honeycomb, I have received a number of letters from those interested in the subject challenging my authorities.
>
> My authorites are these:
>
> In "Foods: Their Composition and Analysis", by A. Wynter Blyth, it says:
>
> "A curiosity of food is a commercial American artificial honey, which is entirely composed of glucose syrup, while the comb is also artificial, and made of paraffin."
>
> In "Practical Dietetics", by W. Gilman Thompson, M. D., Professor of Medicine in the Cornell University Medical College in New York City, visiting physician to the Presbyterian and Bellevue Hospitals, it says:
>
> "Artificial honeycombs are now made from paraffin, stamped into cells to imitate the original, which enables the bees to devote more energy to the manufacture of honey and bestow less on the combs."
>
> In "Food Analysis", by Leffmann and Beam, it says:
>
> "A common method of adulteration consists in pouring glucose syrup over honeycomb from which the honey has been drained, and allowing the mixture to stand until it has acquired a honey flavor."
>
> In "The New International Encyclopædia" for 1903, it says:
>
> "It is stated that much of the so-called honey which is sold contains none of the product gathered by the bee, and is entirely artificial. Of 66 samples of honey examined by the Massachusetts State Board of Health 15 were adulterated with cane-sugar or commercial glucose, or both. One sample contained as high as 88 percent of commercial glucose."
>
> Notwithstanding these apparent authoritative statements, wide inquiry among practical bee-keepers now convinces me that paraffin is not used for this purpose, and never has been except in an experimental way. Therefore, the statement made in the June issue was erroneous. What appears to be further evidence of this is the fact that a reward of $1000 for a sample of paraffin comb was offered some years ago, and I understand has never been claimed. I give the above facts so that my former statements may

not do any injustice to the army of reputable bee-keepers in America.

A hasty glance at this array of authorities might lead one to say that Dr. Walker was more than justified in saying just what she did say in her department in June. But the heading of her present statement is "Artificial Paraffin Honeycomb", and the only thing she talks about is the use of paraffin for comb, whereas in the June number it was *comb honey*—quite another thing—for she says, "the little cells are then filled with glucose slightly flavored to give the honey taste, and the artificial product is ready for use."

The first quotation is entirely to the point; the three successive ones grow weaker as they proceed. The second, from Dr. Thompson, refers only to artificial comb, the bees being credited with the filling—apparently with pure honey. The third, from Leffmann and Beam, refers only to genuine honeycomb, no paraffin in the case. The fourth, has only to do with adulteration or imitation of liquid honey, there being no comb, neither paraffin nor any other kind, in the case.

But it is human nature to make as strong defense as possible, and Dr. Walker has done the manly—rather the womanly—thing to say in plain terms, "the statement made in the June issue was erroneous". If all who have helped to injure the bee-keepers' interests were thus ready to make the *amende honorable*, we should have cause for gratitude.

In a private letter referring to this matter, Dr. Walker wrote us as follows, under date of Aug. 17:

> "I am sure that you will feel satisfied with the statement concerning comb honey, which I have written for the Ladies' Home Journal for September. I think that as long as this statement remains in our reference books there is always danger of its being innocently quoted. It seems a great pity that this should be true. I can not imagine any fair-minded writer wishing in any way to harm a legitimate industry."

We all now know that Dr. Walker never intended in any way to injure or misrepresent honey-producers. And all will be glad to see that she has thus set herself right on the subject, and before the bee-keeping world.

Superseding the Common Fate of All Queens.

This is the time of year when more superseding occurs than at any other time. The beginner is likely to think of superseding as a rare occurrence. Instead of that it is the common thing. In the natural course of events, *every queen closes her career by being superseded.*

Miscellaneous Items

J. B. Hains, a pioneer bee-keeper in Cuyahoga Co., Ohio, the inventor of the Hains atmospheric feeder, in vogue some years ago, died at his home Aug. 24. He bottled honey for the Cleveland market, buying of other bee-keepers after his own crop was disposed of.

……

Some National Association Notes have been sent to us for publication by General Manager N. E. France, as follows:

> Two more victories—lawsuits.
>
> A large number of members have secured board at the Christian Endeavor Hotel, St. Louis, to attend the Fair and bee-keepers' convention. I am securing rooms near each other so as to make it pleasant.
>
> Freight on honey, in cans, boxed or cased, is 4th class; in cans otherwise, double first-class. If those using the single 5-gallon jacketed can will bill the same as cased at 4th class, they will save overcharges.
>
> The last Annual Report had many names of members whose membership had expired, making the total too many. This year over 2000 are at present paid-up members.
>
> I feel there is much valuable work to be done by the Association, and recommend that city members do not cause quarrels among neighbors, and thus allow the Association more time and money to advertise the use of honey, help the sales of the same, etc.
>
> France's honey display at the National Convention is worth going to see. Sept. 27 to 30, Christian Endeavor Hotel, at St. Louis.
>
> The voting ballots for nominating officers for 1905 and three directors are coming in very fast.

……

The Apiary of Mr. A. J. Freeman is shown on the first page. When sending the picture, Mr. Freeman wrote thus:

> I enclose a partial view of my apiary. I have 18 colonies, all in good shape for fall flow. Our flow is now commencing (Aug. 9). I have taken 300 pounds from about 6 colonies, all white clover honey. I am in hopes my 18 colonies will give me at least 50 to 75 pounds each.
>
> My father bought 3 colonies when I was about 13 years old, in Illinois, and they all froze out that same year. Some years later—about 1877—we moved to Kansas, where I have remained ever since, and I have been keeping bees nearly all these years, but the first five years were full of blunders and loss, both in bees and money; but since I am better informed I make a success every year. We always have plenty of honey, and generally lots to sell, and I get 15 cents a pound for all of it—extracted and comb.
>
> My bees are nearly all full-blood Italians, and I think they are the best. I aim to introduce several queens every year from the best breeders.
>
> I read three bee-papers, and I also have about half a dozen bee-books.
>
> I don't have much trouble about introducing queens. I have never lost a colony from bee-moth, as I always keep them strong, with young queens, and plenty of honey on hand. A. J. FREEMAN.

……

The Apiary of T. R. G. Welch, of Morgan Co., Utah, appears on the first page. When sending the photograph he wrote as follows:

> At this writing (Aug. 1) my apiary consists of 150 colonies. In the spring I had 88 in good condition, and have hived 62 swarms, and lost 6 or 8. I am running 40 colonies for extracted and 110 for comb honey. In the shed, at the left hand of the picture, I do all my extracting, and cleaning and grading comb honey. In the open shed are 48 colonies in two rows; on the shed are 14 colonies. All the hives have shade-boards, which are nearly all taken off and set at the back for this occasion. I am just giving the open colony another frame of comb.
>
> The whole apiary covers an area of only 4x6½ rods, with plum trees in front. The shed faces south, 19 degrees east, and the hives set mostly in pairs, about 4 feet apart, and 6 feet between the rows.
>
> I winter my bees in just the positions they stand during the summer.
>
> I am in my 70th year, and do all my work myself. I love the bees and the work. I do not consider myself a professor in apiculture, but for the purpose of being successful I spend much time in studying their habits. July 10 I hived a swarm that to-day (Aug. 1) has 16 drawn combs, Langstroth size, filled with brood and honey, and a super of comb honey ready to take off—in just 21 days. But it was a swarm.
>
> Last year I netted from my apiary $5.00 per colony in honey and beeswax. T. R. G. WELCH.

……

Mr. Philip Prior and His Apiary.—Mr. W. A. Pryal, of San Francisco Co., Calif., some time ago sent in the following concerning a San Francisco apiary and its owner:

> The first gold hunters that came to California landed in San Francisco; the first bees that sought the incomparable nectar of the Golden State, also passed through the Golden Gate and made their first home on the sand-hills of the metropolis of the West. That is close on a century ago, if it is not that far back already. In those days, the city that is built on a hundred hills did not offer much induce-

ment to the busy little workers. They probably voted the young city an uncivilized place; a "dismal excuse" for man, or beast, or insect, to inhabit. Those bees, if they reasoned at all, as well as many a homesick man, yearned to take the first steamer for the East. But never a bee took the steamer homeward. They remained "to grow up with the country", and, like many of the sturdy argonauts, they rejoice in now being reckoned among the great history-makers of the world.

A half century has made San Francisco one of the important commercial cities of the universe. And California—well, where is there its equal in everything that the heart of man yearns for?

In the early history of the bee in San Francisco, there were no large parks, no vast stretches of truck-gardens as there are now, that produce vegetables that are shipped to the cities of the East by the train-load, to say nothing of feeding the hundreds of thousands of inhabitants of the city. Since then the native flora has been augmented by countless kinds of nectar-yielding flowers that make the bees of to-day in the City of St. Francis well contended. It has been stated by some, who have had insufficient information upon the subject, that bees will not thrive in this city. Such is not the fact.

There are a number of small apiaries in the city. From the owners of those I have talked with, I learn that bees do well, and sufficient honey is gathered during the winter to keep the colonies well supplied with stores. The view accompanying this is that of a trim little apiary I photographed on a beautiful day in mid-February. It is in what is known as the Mission District of the city—a portion of the metropolis that is noted for its mild climate. And there are apiaries out by Golden Gate Park, where the climate is not so mild, and the little workers roll in the honey there, too.

The apiary shown is that of Mr. Philip Prior, the principal of one of the public schools of the city. This gentleman is as ardent a worker among the industrious insects as he is a faithful and successful instructor of the rising generation. He tells me that he has averaged as high as 51 pounds of comb honey per colony. This is a pretty big yield, considering that his place is in the neighborhood of five or six miles of the Pacific Ocean. He never loses any colonies during winter. The bees are kept on an ordinary city lot in the rear of his home, which is on one of the principal streets of the city. Owing to the insects having to fly high to clear the residences, they have not been known to molest horses or pedestrians on the street. Bees were formerly kept on the same block by John McCormick some years since, and I learn that he made quite a success of his little apiary.

In connection with what I have stated above, of the bees in the apiary herewith pictured, I will relate that these bees got a great writing up in the city papers, and just because in following the dictates of Nature, they took advantage of the beautiful and warm day, and swarmed. In their simplicity they flew over the barn on the adjoining lot in the rear, and circled around in the play-ground (a very natural thing for them to do) of the Hawthorne School, over which presides my friend and client, Mrs. Mann. Perhaps these bees thought because they were the property of a pedagogue, they were cutting the proper caper by seeking the sacred precincts of a school-yard for an alighting-place for their owner to come and hive them.

But it proved unholy ground for them. The children did not think it fun to see a bee at school; neither did the principal or the other teachers, though they are all learned and estimable ladies, as it is my good fortune to count several of them among my acquaintances.

According to the reports in the papers, the Health Department of the city was called to remove the bees. It seems, however, that the deputies forgot to bring their implements for extracting the business ends of the poor little innocents. At one time it was thought that it would be necessary to call out the fire department, as well as the tough gang that is used in gathering in superfluous dogs, stray cows, and omnivorous William goats. At any rate, the clumsy deputies of the Health Department, who, by the way, have had more experience in chasing the elusive microbe, used a few sulphur candles to subdue the bees, and, as a result, caused the bees to seek a more congenial alighting-place. Where that place is, Principal Prior knoweth not, and thus, between those two departments of the city government, the apiary of our worthy friend lost the first swarm of the season, which was worth say, a golden bill.

Right here I should like to ask why did not the fellow who got up the rhyming lines on the value of swarms start in with March and April? I have had swarms issue in the latter part of March, though the season usually begins in April hereabout. W. A. Pryal.

Mr. C. J. Thies, of Pepin Co., Wis., sent us a newspaper clipping recently on the flight of bees, from which we take these paragraphs, as they refer to Mr. Prior's bees:

> Although it is a distance of 2½ miles from the Prior bee-ranch to Golden Gate Park, the Prior bees make the trip there, collect loads of honey and get back to the hive in two minutes, making a bullet-like flight at the surprising rate of 150 miles an hour.
>
> Mr. Prior has demonstrated this by having an observer watching certain bee-favored places in the park and exactly timing the arrival there of bees he purposely sprinkled with flour as they issued from the hive. He has also kept time on the absence of the whitened bees.

"Your Mother."—We have just received one of the most beautiful home songs that has of late come to this office. It is called "Your Mother", written by J. T. Rider. Price 50 cents per copy. Readers of our paper, by sending 25 cents in postage stamps to the Theatrical Music Supply Co., 44 West 28th St., New York, N.Y., will receive a copy mailed to them postpaid.

Some Expert Opinion

"In the multitude of counsellors there is safety."—Bible.

Hand-Holes or Cleats on Supers.

14.—*Do you want hand-holes, or cleats, on both sides and ends of supers? I mean principally extracting-supers.*

S. T. Pettit (Ont.)—No.

R. C. Aikin (Colo.)—I do.

Rev. M. Mahin (Ind.)—No.

N. E. France (Wis.)—Cleats.

Mrs. J. M. Null (Mo.)—Yes.

Adrian Getaz (Tenn.)—Yes.

G. M. Doolittle (N. Y.)—Cleats, always.

Wm. Rohrig (Ariz.)—Yes, hand-holes preferred.

E. S. Lovesy (Utah)—Hand-holes on sides and ends.

R. L. Taylor (Mich.)—Yes, good hand-holes—no cleats.

Prof. A. J. Cook (Calif.)—They are convenient, and so desirable.

J. M. Hambaugh (Nev.)—Hand-holes are preferable to cleats at the ends.

O. O. Poppleton (Fla.)—Cleats all around, but I would prefer hand-holes.

C. H. Dibbern (Ill.)—I prefer hand-holes at the ends of extracting supers only.

Jas. A. Stone (Ill.)—Just on the ends, I think, is sufficient; less apt to overbalance.

C. P. Dadant (Ill.)—We want them on the sides, though they are perhaps also desirable on the ends.

P. H. Elwood (N. Y.)—Either on both sides or both ends, but not necessary on both sides and ends.

Dr. C. C. Miller (Ill.)—If I used extracting supers I'd want cleats at the ends, as well as on the hives.

C. Davenport (Minn.)—Yes, hand-holes on the sides and ends of comb honey supers, extracting-supers and hives.

E. Whitcomb (Nebr.)—Yes, hand-holes are necessary when the hives have been tiered up. I would prefer the hand-hole to a cleat, for the reason that there is no material about it, and it lessens the weight of the hive rather than adding to it. Simplicity is what we need in apiculture.

Dr. J. P. H. Brown (Ga.)—I use hand-holes. Cleats, unless they are put on with screws, frequently get loose and come off.

L. Stachelhausen (Tex.)—I use them on the ends only; have no use for hand-holes on the sides of the 10-frame supers.

Eugene Secor (Iowa)—I prefer hand-holes on the sides, but if supers' sides are made of ½-inch lumber, I would use cleats or hand-holes in the ends.

E. D. Townsend (Mich.)—We use a 10-frame Langstroth body for an upper story to hold our extracting-combs, and with this size we have no use for hand-holes in the sides.

James A. Green (Colo.)—Yes. After having used a great many supers having hand-holes only in the ends, and others having them only in the sides, I feel that I never want any more that do not have both.

G. W. Demaree (Ky.)—I have some supers that have hand supports both at the sides and ends, but I never use the side holes. I prefer the hand supports at the ends of all "tiering" cases and supers, no matter how deep or shallow.

Convention Proceedings

Report of the Fourth Annual Meeting of the Texas State Bee-Keepers' Association, Held at College Station, Tex., July 5 to 8, 1904.

REPORTED BY LOUIS H. SCHOLL.

(Continued from page 615.)

"PRODUCTION AND PROPER GRADING OF SECTION HONEY" was discussed by W. E. Crandall, the manager of the Texas Honey-Producers' Association, and who said that some of the bee-keepers had been trying to produce it exclusively, and that he does not approve of this. If the season is not a favorable one for the production of honey in sections—and it takes a good flow of honey for that—it will be best to produce some other kind of honey, as extracted or bulk comb.

During a good year it is all right to produce some section honey, but for the bee-keeper who wants to produce it exclusively it is not deemed best to do so.

If it is produced it should be put on the market in a nice, clean way, in new shipping-cases, and nothing but good honey put in.

H. A. Mitchell was asked how he produced the nice honey he had on exhibition last year, when he carried off the gold medal for the best section honey of the State. This year he again took first prize.

This honey is from basswood, and where Mr. Mitchell lives and has his apiaries there is a great deal of it. When he has a good flow it fairly flows into the hives, and that is the reason he gets such a good quality of honey. He uses 7-to-the-foot, 4½x4½ square section, and all-wood separators in T-tin supers. This gives thinner combs, and there is an advantage in it. The bees fill them better and finish them nicer. They also fill more sections.

F. J. R. Davenport said that there were three essential points necessary in the production of fancy comb honey. First, prolific queens; second, rousing colonies; and third, a heavy honey-flow. If you have not these you might just as well set your supers on a stump, and you will not get a bit less surplus honey than if you have them on colonies with any of the above lacking.

H. H. Hyde dwelt on the use of a shallow super on the colony before a honey-flow, and raising it at the beginning of the white flow and putting the section super between it and the brood-chamber. Then, when the sections in this one are two-thirds full, put another below it. The shallow super above is used for extracted honey.

Udo Toepperwein read the following paper on

THE IMPORTANCE OF UNIFORM, STANDARD CANS FOR TEXAS.

This is a matter that we have had up for two years, and we adopted the 3-lb. friction-top cans, 20 in a case; 60-lb. friction-top pails, 10 in a case; 12-lb. friction-top pails, 10 in a case; the 60-lb. cans with 8-inch screw caps, and 60-lb. cans with 1⅝-inch screw caps, 2 in a case. I think this one of the best moves that we ever made, as there are now only four different sizes of cans. This makes it very easy for the dealer to keep a complete stock, and the result is that the bee-keepers can get, in most cases, nearly any size they want, or the next size to that. With the four standard-size packages honey is sold very nearly as easily in one size as in another.

The 3 and 6 pound friction-top cans are taking the lead now, and the demand for these sizes is increasing very rapidly, as these are just the right size for family use. The 60-lb. cans are too large for family trade, and so are the 12-lb., to a great extent. The 12-lb. cans are too small for retailers to dish out the honey to the customers, and for this purpose the 60-lb. cans are the right size.

The 3 and 6 pound cans weigh only 60 lbs to the case, and are of a shape so as to be very easily handled. The 12-lb. and 60-lb. cans, however, are very hard to handle, as the packages are too clumsy.

There is yet a great demand in Uvalde for the 6 and 12 pound cans with screw caps, which is quite a drawback to the dealers. All screw-cap cans are very hard to open or to close, and if a friction-top can is closed it never leaks, if ripe honey is put in the cans, even if the cans are turned upside down, while every screw-top can leaks more or less if turned upside down or on the side.

I think that we should encourage the 3 and the 6 pound friction-top cans, which are nicely shaped, and are in light packages. We can not discard the 60-lb. cans altogether, as there will always be a demand for them, but there is a tendency for a lighter package all the time, and a 60-lb. all around should be encouraged.

I think another thing that should be taken up is whether or not it would pay us to use the 60-lb. cans cased singly—one in a case. If we would have all packages weigh 60-lbs. there would be less young bee-keepers with worn-out backs from handling too heavy cases of honey. The 60-lb. cans, two in a case, weigh about 135 pounds with the case, which is too heavy for one person to handle. Would it not pay us to use only one can in a case, at only a very small additional expense? I am sure it would not cost much more per case.

Udo Toepperwein.

The bee-keepers endorsed the views of Mr. Toepperwein, and a thorough discussion followed.

It was decided that the 12-lb. cans be cut out as much as possible. The merchants are wanting a 60-pound package, as the heavier ones are too hard to handle, therefore the bee-keepers should act on this matter in conformity with the wishes of the merchants who handle their product.

J. F. Teel said that the merchants from his part of the State wanted the 60-lb. cans cased singly, so as to make a lighter package.

Several of the members gave some disadvantages of such a package. The main one was that it was too high, and that it was too often thrown down on its side, when the contents would leak out. Any package that is too high is thrown over in rapid handling, and in piling up, as everybody knows too well if they are acquainted with the way the railroad people handle things.

W. H. Laws told of an instance where he had shipped a case of honey in a 60-lb. can cased singly. He delivered it to the freight agent. About a week afterward he saw the same case lying on its side in the freight depot, and almost all the honey leaked out of the can. Since then, whenever he has to ship out a single can, he simply sends it out in a case that holds two cans, taking out one of them, so that there is not so much danger of the case being turned over.

Willie Atchley told of a new package for honey that his father, E. J. Atchley, got out recently. It is a square can the same as the old 8-inch screw-top can, but only half as high, and holds 25 pounds. This makes a nice can for honey, and two in a case makes a package of about 60 pounds with the case. It is a flat package, and is easily handled. The cans are not so deep, and therefore it is a good all-around can for the bee-keeper. The cost is low, too.

The Texas Honey-Producers' Association has had a great deal of experience in this line, and they say that a 60-lb. package is in the greatest demand with them; that there is a call for one can of 60 pounds of honey, or a single can, and if shipped out in a case by itself it was unsatisfactory. They could get any amount of orders for single 60-lb. cans, and that they have thought it best to have part of the honey in one-can cases, and some in two-can cases of the 60-lb. cans.

He said that there was no place for the 12-lb. cans, as those who sometimes ordered them and were told that they had none of them would order the 6-lb. cans, every time. Therefore, the bee-keepers will strive toward having none but the 3 and 6 pound friction-top cans in 60-lb. packages, and the 60-lb. cans in one and two case sizes until they can get a better size of the large cans.

(Continued next week.)

Contributed Articles

Queen-Excluders and Their Use.

BY C. P. DADANT.

MR. DADANT:—I have read with interest your article regarding queen-excluders, but with my 8 and 10 frame hives I am obliged to differ from you. I began a few days ago to extract, but found the honey, in part, not ripe enough to suit me, therefore I gave it up again. I am now putting the fourth hive-bodies (or third supers) on most of my colonies. But let me tell in what condition I find part of my hives. I suspect the majority are in that condition.

First, the body or brood-chamber is mostly filled with pollen; some have some brood, some have none. The second body, or first super, is largely filled with brood; third body, or second super, has some brood in most of the center combs. I have a few hives with queen-excluder on an 8-frame body; these hives have two supers nearly filled with honey. (When I speak about supers here they are full-depth extracting supers, the same as the brood-chamber).

With your large hives the queens may stay down; with my 8 and 10 frame hives they will move up. It seems the bees crowd the brood-chamber full of pollen, and then move up, but then again some have plenty of empty cells below, and still the brood is above.

Excuse this letter, but I felt like writing a few lines in reply to your article, as my bees work so differently from yours. ROBT. A. HOLEKAMP.

St. Louis Co., Mo., Aug. 20.

I have just received the above letter. I have also lately received similar information from a bee-keeper located only about 12 miles from us, a Mr. Null, who also uses the 10-frame Langstroth hive. This illustrates the necessity of never dictating any special method of culture to different people located in different spots, and using different implements. It is very evident to me that the difference in results is due to the hives used. We are in the habit of saying that the advantages of the movable-frame hive reside entirely in the manipulations that the hive permits, but there is certainly something also in the size and shape of a hive, not only for wintering but in many other instances.

The hive we use, and have been using for years, is similar to the regular Langstroth in every respect, except the length and depth of the frames, and I believe I can show why the bees behave differently in these.

Queens do not like to lay eggs in a small comb, but they like still less to go over an empty space, or a space covered with wood, while laying. Those of my readers who have tried frames divided horizontally or vertically in the middle by a slat, have noticed that in numerous instances the queens will breed on one side of the dividing slat and not on the other. That is how I explain the reluctance of the queen to leave the brood-combs. She will more readily cross over from one comb to the other than step over a bee-space and two wooden slats to ascend or descend from one story to another. So if the combs are large and spacious it will not be difficult to keep the queen in the breeding apartment without excluders.

But if the frames are not sufficiently numerous, or the combs are not large enough to accommodate the queen to the fullest of her laying capacity, she will leave the story she occupies, and if she finds another of equal size, as to the capacity of the brood-combs, she will there elect her domicile permanently. There is no probability of her leaving the upper story after she has once moved there, until this upper story again becomes crowded with honey. As the bees always put their honey above them, or between them and the roof, as far away from the entrance as possible, the queen will sooner or later be crowded back, unless the space occupied is too large for their needs.

With a very capacious brood-chamber, capable of accommodating the most prolific queens, and supers of shallower depth, such as we use, we avoid the difficulties mentioned. The queen has usually sufficient room below for breeding, and when she goes to the upper story she finds there a shallower frame, which does not permit her to lay her eggs in a large circle such as she prefers. She, therefore, is less prone to remain.

As to the great gathering and storing of pollen in the brood-combs, this is only a temporary occurrence, due to the peculiar season we are having in this part of the country. The flowers have bloomed uninterruptedly from May till August, and while there has been occasion for the bees to gather as much pollen as they wished right along, the honey harvest has been very intermittent. A good flow of honey would cause the bees to gather less pollen, and the surplus of it would be consumed. But it behooves the bee-keeper to make sure of what the brood-combs contain for winter.

If I were in the place of the above-mentioned bee-keepers, I would take up those lower stories and place them at the top, thus doing away with the pollen-combs for the time. It would also be necessary to crowd the bees some for room, that is, give them less room that if all was in a normal condition. The colony would thus crowd more honey into the brood apartment, which would make it safer for winter. When a colony is given ample space with extractor-combs already built, there is a liability of their scattering their honey so that the lower story is in danger of not being sufficiently supplied with food for winter.

The prospect just now for a fall honey-flow is very promising. We have never seen more bloom and stronger colonies than at present. If the weather is not too cool or too wet from now until frost, there is promise of as ample a harvest as I ever saw. Hancock Co., Ill., Aug. 23.

Priority Rights in Locations for Bees.

BY L. V. RICKETTS.

On page 327 appears an article on the rights of bee-keepers, in which I asked a number of questions. On page 425, Mr. Hasty attempted to reply to the article, but made no attempt at answering any of the questions. He seems to be trying to evade the main issue by substantially alleging that all who think differently from him on this subject are actuated by a desire to do a wrong. This accusation is as absurd and as unreasonable as was his previous attack on the crowding bee-keepers, in which he called them names. (Page 346—1903; and page 105—1904.) We will now sum up the evidence at hand, and see whether or not Mr. Hasty is right in his conclusions.

On page 805 (1903), Delos Wood, of California, while attending the Los Angeles convention, spoke very emphatically in line with the argument as set forth in my article on page 327, and judging from the fact that Mr. Wood was attending the convention, and from his writings in the American Bee Journal, we may safely conclude that he is one of California's leading bee-keepers. This would show that he was not prompted from lust, but was speaking from a clear and unselfish desire to give each one his just dues.

On page 381, Mr. McColley says: "I rather admire the way L. V. Ricketts goes for those bee-men that think they own the earth. I rather think 'hog' would fit them". Now we find by reading Mr. McColley's article that he has an apiary in the South and one in the North, yet he takes sides against Mr. Hasty's views. Does this show lust or a desire to do wrong on the part of Mr. McColley?

On page 441, Mrs. Amos, in her very interesting article, says that she has a home apiary and a small out-apiary, which indicates that she is an established bee-keeper, having territory occupied by her bees, yet in her article she says: "I call Mr. Ricketts' article a strong one, too. Bee-keepers, as well as others, need to be reminded that there are two sides to a question". No lust or selfishness in this, Mr. Hasty.

Now, as to myself, I own 80 acres of land four miles southwest from Pullman, Wash., on which I live and keep my bees, and five miles south from Pullman and five miles southeast from home I own 160 acres. On this last place I have never established an apiary, although it is a splendid location, and no apiary nearer than 12 miles of either place. I am so very busy with my farms, stock, and dairy business, that I haven't the time to give attention to an out-apiary, so you see I am not lusting for some one's bee-territory.

Could it be possible that Mr. Hasty has a petit interest in the shape of a small apiary which he is zealously guarding against all would-be intruders, that causes him to be so outspoken against others likely to crowd him a little? Or is it because he is paid to afterthink, and this is one of his afterthinklets? It appears to me that Mr. Hasty sought, with one fell swoop of his pen, to settle for all time the question of the priority rights of bee-keepers. I could not sit back and silently observe him posing as *lawyer, judge,* and *jury* in this case.

My only motive for writing the previous article on this subject was to arouse interest on the question, and to show that it is a great problem having two sides. My advice is to use great judgment and discretion in each individual case.

Mr. Hasty concludes his article by saying: "Now, it isn't by calling things by their right names that Mr. Hasty will disgrace his department and himself". Now let us see whether or not Mr. Hasty always calls people and things by their right name.

On page 10 (1903), when referring to the picture of some distinguished ladies and gentlemen on the title page of No. 48 (1902), he says, "My, what a lot of donkeys gazed out upon us from the title page of No. 48"! Now, really, Mr. Hasty, is that calling things by their right name?

On page 8 (1904), in speaking of that beautiful young Texas bride, whose picture appears on the title page of No. 50, page 785 (1903), he refers to her as "that critter". If Mrs. Hyde gets after Mr. Hasty with a broom-stick, she will make him hide-out in great haste.

That naughty child, what shall we do with him if he does not desist from calling people and things "by their right names"?

Having accomplished my purpose, as stated above, and realizing that space in the "Old Reliable" is too valuable to be filled with long-drawn wars of words, there shall be no long war between my friend Mr. Hasty and me. Thus ends the controversy so far as I am concerned.

Whitman Co., Wash.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Floor Polish.

A paragraph in the Herald and Presbyter says that turpentine mixed with beeswax makes the very best floor polish.

Milk-Crackers and Honey.

A supply of dainty biscuit or crackers is very useful in hot weather. Saltines, or even milk-crackers, spread lightly with butter and crisped in the oven, and served with a comb of honey, a plate of candied ginger, or a jar of marmalade, make an acceptable finish to an unpretending midday meal.

So says the Herald and Presbyter.

Importance of Carefulness with Bees.

Now comes the time of year when habits of neatness generally accredited to the gentler sex are of importance in a very practical way. One who is slovenly, whether man or woman, is likely to be careless in exposing honey toward the close of the season, when robber-bees are prowling about, eager for stolen sweets. Perhaps a comb of brood is taken out of a hive and carelessly left for a time, while the operator is attending to something else—perhaps entirely forgotten for a time. It does not take the robber-bees long to start a land-office business, and if the comb is hastily taken away it may only make matters worse if a weak colony happens to be near. Better leave in place of the removed comb another containing a very little honey, or even an empty comb, so the bees will tire themselves out on that rather than to attack a neighboring colony. Better still to be careful in the first place.

Bee-Keeping for Weak Patients.

Nowadays the doctors are urging, as never before, that sunshine and the open air is the thing for many of the sisters who need toning up, and many a one is taking doses of light and air as she would doses of any other medicine. In many cases a doctor might do a worse thing than to avoid mention of the curative power of those elements, but quietly to manage to have his listless weak patients become interested in keeping bees.

Wives as Honey-Salesladies.

Mr. A. Wakerell, speaking in the British Bee Journal of selling honey, says:

> I may offer another little "tip" to bee-keepers who, like myself, are married men, and which I have found to answer admirably, viz.: giving my wife a little commission on each pound of honey disposed of. In this way I sell a great deal more honey than I otherwise should be able to do.

Now, if Mr. Wakerell found profit in allowing his wife a commission on sales, why not others? It might be a good thing for any of the sisters who are possessed of that sometimes very convenient piece of property—a husband—to read to him gently, but persuasively, the foregoing item.

Artificial Eggs, So-called.

In connection with artificially-made comb honey is mentioned in a recent copy of the American Bee Journal, artificially made eggs. When this product was first placed on the market we lived in Orange, N. J., and the so-called egg-factory was, I think, in Newark, about five miles distant. Mother bought a package of the egg-powder and tried it, and decided in her own mind that it was made of eggs, pure and simple, dried and pulverized. She experimented her our eggs, and with product could not be detected from the other; it was identical in appearance and work.

Clinton Co., N. Y. FRANCES ELLEN WHEELER.

Dried eggs, or eggs prepared in any way to preserve their good qualities, are just as good and honest a product as dried apples or canned peaches. There is nothing artificial in the case.

I don't know exactly the place to which you refer in this Journal, but if *artificially-made* eggs were mentioned, it may have been suggested by a very bright article written a good many years ago by Mr. S. F. Newman, of Ohio. It was a burlesque—take-off—on the production of artificial comb honey.

> Different materials were used to manufacture the different parts of the egg—carrots for example, for coloring the yolk—and the undertaking was so far successful that the eggs were hatched out under the fostering care of an old biddy; but, alas, one of the ingredients was at fault, and the poor little chicken came into this cold world utterly devoid of feathers!
>
> The idea was, probably, that this was as reasonable to believe as the wild stories of artificially-made honey.

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

HONEY-ADULTERATORS AS MEMBERS.

Good plan not to take the adulterators of honey into membership—only a door should be left unlocked, that

"While the lamp holds out to burn
The vilest sinner may return."

Also, lots of serviceable people have a mean prejudice that can't be got out of them. Bad plan to make it possible for one or two such to keep out a desirable candidate. This anent the Constitution on page 536.

LESS SWARMING THIS SEASON.

Edwin Bevins seems to have found swarming bad this season, but not so bad as last. Same here. Page 537.

ORIGIN OF ALFALFA.

If the word "alfalfa" is Arabic, and came to us through the Spanish Americans, it would rather indicate that the plant is a native of western Asia. Same plant is not the same (Irish bull!) when it comes to us through Europe under the name of Lucerne. In Europe it has had long evolution under different influences. Page 541.

BETTER-FLAVORED HONEY DEMANDED.

And it is a fine, high flavor that we must be having in honey, else a slump in the honey market. Mr. R. A. Burnett strongly intimates that. Better then that we "read, mark and inwardly digest"—and let the perfectly willing bee inwardly digest that extracted honey some more. Page 547.

BEES OF NOW AND OF 40 YEARS AGO.

J. E. Crane drops the hint that perhaps the Italian bee is not as vigorous as it used to be 40 years ago. Worth thinking of. But don't jump to that conclusion too nimbly. Page 548.

NUMBER OF FRAMES PREFERRED IN A HIVE.

"Once more into the breach" the 8-frame hive and the 10-frame hive go against each other. Nine experts are for the former and seven for the latter. Also seven contrive to get themselves out of count one way or another (get killed), while one wants 12, and one wants 9 frames. Page 549.

METHODS OF QUEEN-REARING—CLIPPING QUEENS.

At times perhaps we get into the condition of the people at Athens, who lived on purpose to get hold of something new. A new queen-rearing method then should certainly make us prick up our ears—methods in print so few. How about the Broderick method? Wish I was more capable of judging. The main points about it seem to be two in number. Whether it is original with Mr. B. to rear queens only from the second occupants of the cells, I am not able to say. That's not very important to the rest of us if the thing itself is of a high order of importance—as apparently it may be. Reasonable that the first occupant may suffer more or less neglect at first—and turn out something else than the very best queen on account of it. But what *positive* assurance have we that the second occupant will never be contemptuously poked around in the cell at first introduction?

But the other fundamental point—my, what a lot of kicking it's going to cause among the clippers to assume that a strong colony in May always starts supersedure cells when you clip their queen! That, if so, is a very sore charge against clipping as a practice. And about two-thirds of the brethren, I take it, are clippers—fanatically so some of them. What do I think? I think bees are always disturbed in their minds when their queen is handled to clip her. Very likely the clipping itself causes part of it, but I think the handling is one main thing. I would contribute this additional point to the method. If you find your cell-building colony is getting languid in its work, catch the queen and handle her some more. I think pretty strongly that if any queen is handled, say once or twice a week, the bees will try to supersede her, if they don't do worse. When a queen is handled there is a numerously graded set of things that may happen. The bees may kill her quick as a flash the minute they get hold of her. (From my own experience when I was a beginner.) They may ball ber till she is worthless or dead. They may ball her not very furiously, and soon let her go. They may go deliberately about superseding her. (This not from my own experience, but inferred from Mr. Broderick's.) They may threaten to supersede, but not persevere to accomplish it. They may merely "turn up their noses" a little for awhile—and anon the disagreeable scent disappears and all is lovely again.

Mr. Broderick's experience that bees accept just as many larvæ in dry cells as in jelly is important—if others find it so also. Polish that quill on a stone till the sharp edges are all taken off. Page 534.—[See Mr. Broderick's correction on the queen-clipping matter, page 564.—EDITOR.]

MOST HONEY COMES FROM THE HIVE!

The printer man bungled S. T. Pettit's answer and makes him father of a brilliant joke which he is doubtless entirely innocent of. The principal source of surplus honey is the hive. Same here—that's where I get mine. Page 549.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Introducing Honey-Daubed Queens.

On page 590, Franklin G. Fox asks me to report after trying the plan of introducing a queen by daubing her with honey and dropping her in. I tried the plan many years ago, when it was somewhat commonly practiced before the present ways of introducing were known; but it was generally stipulated that the queen must be daubed with honey taken from the hive into which she was to be introduced. In many cases it is safe, but not always.

C. C. MILLER.

Using the Queen to the Best Advantage.

1. I am a beginner, and would like to know how to use the queen to the best advantage. Could I leave all the bees possible in a top story that is pretty well filled with honey, set it by itself for two or three days, and then give them the queen? Or would it be best to kill one of my queens, and replace it with the new queen?

2. About how long before the queen ought to begin laying? CANADA.

ANSWERS.—1. If you take an upper story containing honey, but no brood, and set it in a new place, you will probably find it entirely deserted by the bees unless you imprison them for two or three days, and then there may be danger of smothering. If the season of gathering is entirely over, it may be the best plan to kill the queen of a colony and introduce the new queen in her stead. If, however, you are anxious to preserve both queens, and the harvest is still on, or you are willing to feed, you may do this: Take an empty hive, put into it one frame of brood and bees from the old hive with the queen on it, fill up with empty combs, set in place of the old hive, removing the old hive with brood and bees to a new place, at the same time introducing the new queen into the old hive.

2. Possibly she may begin laying as soon as the bees liberate her from the cage; possibly not for a week.

Killing the Bees to Get the Honey.

I am selling out with the intention of leaving my present location, and I can not take my bees with me or sell them for what they are worth. How can I kill them so as to get the honey? I have several colonies doing very well, but I know but little about handling them. MISSOURI.

ANSWER.—The only way that was known at one time to get honey from bees was to kill them with brimstone. Dig a pit in the ground, put in it some burning coals, drop on some brimstone or sulphur, set the hive over, and quickly close up with cloths or rags every avenue of escape. Bisulphide of carbon or chloroform may also be used. It's a sad proceeding at best.

Why Did the Bees Die?—Other Questions.

1. I am a beginner in the bee-business, and have only 12 colonies. We had a very severe winter and a late spring. I put 14 colonies into winter quarters, but lost 2. In one of them I found the bees dead in a cluster in one side of the hive. All the honey had gone to the middle of the hive, and the other half (5 frames) was mostly full of sealed honey. There were plenty of bees in the hive, plenty of pollen, no signs of disease, and the weather was very cold. What was the trouble with them?

2. In looking through my colonies the other day I found a nice queen lying in front of a hive, that I think had been pulled out that day. On looking into the hive I found that they had a nice young queen. Did they kill the old queen?

3. At the same time I found two other hives that had a fine, ripe-looking queen-cell sealed in each of them, and I thought they were fixing to swarm. Now I find that the cells have hatched and the bees have not swarmed. How is that? VIRGINIA.

ANSWERS.—1. The trouble was the long spell of cold. Usually a mild spell comes soon enough so that the bees can leave the cluster, and bring to it enough honey from farther out to last till the next warm spell. But in this case they used up all the honey in their reach before another warm spell came, and they had their choice to leave the cluster and freeze to death or cling together and starve.

2. Yes, it was a case of superseding.

3. The cells may have started for swarming, and bad weather, a let-up in the honey-flow, or something else may have made the bees give up swarming, but still allowing a young queen to emerge. But you speak as if there were only a single cell in each hive, in which case there was probably no intention to swarm, but to supersede the queen.

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we have used it ourselves.

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24A17t CADOTT, WIS.

FROM MANY FIELDS

Bees Hard at Work—King-Birds.

Bees are booming on heartsease, and soon the Spanish-needle will be ready. We have had lots of rain.

In last week's Bee Journal one of the correspondents says that king-birds or bee-martins do not catch bees. Tell him to cut the gizzard open, and see the bee-legs in there.

A. J. FREEMAN.

Neosho Co., Kans., Aug. 24.

Quite Good Season.

The season has been quite good, but so many cold nights, not over a half a dozen warm ones. There was lots of honey, if the weather had been so the bees could have gotten it. They never got to work early, but not as late as last year. Basswood was fine. I must claim the honor of having something that Dr. Miller does not have—a colony to swarm once with a cell, and this colony never swarmed last year.

The honey market is no good—10 cents wholesale. I won't sell for that, as there are some that must be gotten rid of first.

SUBSCRIBER.

Faribault Co., Minn., Sept. 1.

Rolling in Yellow Honey.

The honey crop this year is very good in quantity, but not in quality. The first honey we get is from chinquapin bloom, and it has a bitter flavor. The flow lasted longer than usual this season, but now the partridge-pea is in bloom, and the bees are rolling in a beautiful yellow honey of the best flavor.

D. H. HERLONG.

Tolen Co., Fla., Aug. 20.

Honey from Smartweed.

Bees were working good on the second bloom of alfalfa when I left Oklahoma.

I visited a bee-keeper here and bought some honey from him. I was surprised at the cheap price at which he sold it, but when it came on the table I understood it. It came from smartweed and was dark, with a rank flavor.

The American Bee Journal is all right, and helpful to a beginner.

E. C. PENDROY.

Lyon Co., Kans., Aug. 22.

Honey-Flow Fair—Prospect Good.

The honey-flow has been fairly good this season, but not nearly so good as it was last. I think we have had too much rain and cloudy weather during

Fine Breeding Queens, $2

Sample of Bees, free.

J. F. MICHAEL, RT. 1, WINCHESTER, IND.
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26—36A4t

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Our specialty is making **SECTIONS**, and they are the best in the market. Wisconsin Basswood is the right kind for them. We have a full line of **BEE-SUPPLIES.** Write for FREE Illustrated Catalog and Price-List.

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Has an established reputation, because made by a process that produces the **Cleanest and Purest, Richest in Color and Odor, Most Transparent and Toughest**—in fact, the best and most beautiful Foundation made. If you have never seen it, don't fail to send for samples. Working wax into Foundation for Cash a specialty. Beeswax always wanted at highest price. A full line of **SUPPLIES**, retail and wholesale. Catalog and prices with samples free on application.

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If you want your orders filled **within 24 hours**, send them to us. We have the largest stock in Michigan, and can ship at once.
Beeswax wanted at highest market prices.

LEWIS C. & A. G. WOODMAN, Grand Rapids, Mich.

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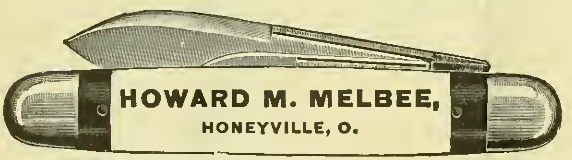
The Novelty Pocket-Knife.

Your Name and Address on one side—Three Bees on the other side.



[THIS CUT IS THE FULL SIZE OF THE KNIFE.]

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last-time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00.) We will club the Novelty Knife and the Bee Journal for one year, both for $2.00.

GEORGE W. YORK & CO. Chicago. Ill

☞Please allow about two weeks for your knife order to be filled.

Please Mention the Bee Journal when writing Advertisers••••

the past month. The bees have gathered barely enough to subsist on, but at present they are doing better.

I think the prospects are fairly good for the fall flow if the weather is favorable. There is an abundance of bloom from goldenrod, Spanish-needle and smartweed.

I looked through my colonies yesterday, and found that they had plenty of brood and larvæ. D. H. PLANK.

Cass Co., Mo., Aug. 25.

Beedom Boiled Down

The Fretful Cares and Fears.

The little cares that fretted me,
I lost them yesterday
Among the fields above the sea,
Among the winds at play;
Among the lowing of the herds,
The rustling of the trees,
Among the singing of the birds,
The humming of the bees.

The foolish fears of what might happen—
I cast them all away
Among the clover-scented grass,
Among the new-mown hay;
Among the husking of the corn
Where drowsy poppies nod,
Where ill thoughts die and good are born—
Out in the fields with God.

—E. B. BROWNING.

Marketing Comb Honey.

What I am about to say now is not intended for bee-keepers who scrape and grade their comb honey, and put it up in clean, new shipping-cases before sending to market. All such, to save time, may skip this, as "the shoe won't fit"; but the other class—those who are too indifferent or ignorant, or are too something, of the principles of making sales—should read this carefully; and when I am addressing this class I am well aware that I am speaking to the great majority of comb-honey producers; for it is indeed a fact that the great bulk of the comb honey that goes to market is not scraped, or if scraped it is improperly graded, if graded at all; or it may be scraped, but injured in appearance by being put in badly soiled shipping-cases, or, worse still, home-made cases.

I have been through a number of commission houses, and have looked over the lots of honey that have been received. I have seen every shipment

Louis Hanssen's Sons

Carry a complete stock of

G. B. LEWIS CO.'S

B-WARE

Lowest prices and quick service.
Send us your orders and find out.

Davenport, Iowa, 213-215 W. 2d St

Please mention the Bee Journal. 36A26t

that has come to Medina; and to see the ordinary honey that is shipped to market, which otherwise might have been No. 1 and "Fancy", all mixed up in the cases—cases soiled, sections unscraped—well, it is enough to make one's heart ache. Then the producer of such honey, when he gets his returns, complains because they are below the market as quoted in the journals; and he thinks his commission man is dishonest, when the fact is the whole trouble is with himself. If he had taken a day or two to scrape and properly grade the honey, he could have earned anywhere from $25 to $100 a day in the larger returns secured for that same honey. A little No. 2 or off-grade honey put in with No. 1 and "Fancy", puts the whole caseful down to the price of No. 2.

We have received several lots of such honey, and, rather than make poor returns, we have gone to the expense of regrading and scraping, selling the "Fancy" at one price, the best the market affords, the No. 1 in another, and the No. 2 in still another. Of course, we charged the producer for the time expended; but in doing so we have earned him good money. Where we buy this mixed honey outright, of course we pay a low figure for it, then grade and scrape, and sometimes recase, with the result that we make a good margin on our investment. But should the buyer profit by the negligence, carelessness, and indifference of the producer? It takes experience and skill to get comb honey, and a good bit of it sometimes, I think. It takes but just a little more of the same skill to put that honey, when once secured, in good marketable shape where it will bring the best the market affords. But this is not all of it. Besides securing the best prices, the producer will usually get *prompt returns*. No. 1 and "Fancy" sell, as a rule, with little or no delay, where mixed and ungraded goods are a drug on the market; and the poor bee-keeper waits months, sometimes, before he gets returns; then when he does get them his honey

A CHANCE to get
FINE ITALIAN QUEENS.
Beauty and utility. None better.
J. F. MICHAEL R. 1, Winchester, Ind.
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Diseases of Bees.

I have a positive cure for black brood, pickled brood and bee-paralysis, and have no doubt same treatment will cure foul brood.
Send for particulars to
HENRY ALLEY,
31Dtf WENHAM, MASS.
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This Lightning **Lice Killing Machine** kills all lice and mites. No injury to birds or feathers. Handles any fowl, smallest chick to largest gobbler. Made in three sizes Pays for itself first season. Also *Lightning Lice Killing Powder, Poultry Bits, Lice Murder, etc.* We secure special low express rates. Catalog mailed free. Write for it.
CHAS. SCHILD CO.,
1D26t 401 Prospect St., CLEVELAND, OHIO.

500 Colonies of Bees for sale, or exchange, for good securities. Abundant alfalfa range; no failures. Reason for selling, ill-health. Address,
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Root's Goods at Root's Prices.
Everything used by Bee-Keepers. POUDER'S HONEY-JARS.
Prompt Service.
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STRAWBERRY AND VEGETABLE DEALERS

The Passenger Department of the Illinois Central Railroad Company have recently issued a publication known as Circular No. 12, in which is described the
best territory in this country
for the growing of early strawberries and early vegetables. Every dealer in such products should address a postal card to the undersigned at DUBUQUE, IOWA, requesting a copy of "Circular No. 12."
J. F. MERRY, Asst. Gen'l Pass'r Agent.
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Bee-Keepers Don't forget that we are the largest jobbers in the United States of *Root's Bee-Supplies, Johnson Incubators and Brooders, Humphrey's and Mann's Bone Cutters, Poultry Supplies of all kinds, Seeds and Implements.* Remember, you get these goods at Factory Prices, and save half the freight. Let us book your order for Golden Italian, Red Clover and Carniolan *Queens*; listed in our Catalog. Send for Free Illustrated Catalog.
GRIGGS BROS.
521 Monroe Street, TOLEDO, OHIO
Please mention Bee Journal when writing

Send for Our 1904 Catalog and Price-List.
OUR **HIVES AND SECTIONS**
Are Perfect in Workmanship and Material.
By sending in your order NOW, you will SAVE MONEY, and secure prompt shipment.
PAGE & LYON MFG. CO., New London, Wis. U.S.A.
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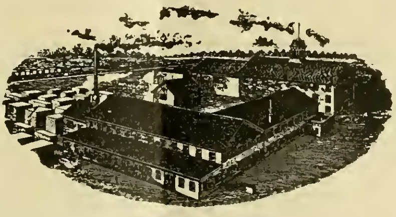

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Located on Oakland Avenue on the South side of the Exposition within 100 feet of one of the entrance gates to the Fair Grounds, and on Market Street car line running from the Union Station direct to the hotel. It is a mammoth structure covering 5 acres of ground, 3 stories in height, with a capacity of 3000 people daily. Every room is an outside room, and handsomely and comfortably furnished. There are wide verandas, a large rotunda, offices, parlor, numerous baths, concessionary rooms, United States Post Office, a lunch counter, restaurant and dining-room with a seating capacity of 1500 people. The hotel is endorsed by the Clergy, World's Fair Official Bankers and Merchants in St. Louis, as well as having the approval of the Christian Endeavorers. We are frequently in receipt of testimonials like the following:

"TO WHOM IT MAY CONCERN:—This is to certify that I have been at the Christian Endeavor Hotel for 7 days with a party of 161, and desire to state that we have been well pleased with the accommodations. The management is courteous, the rooms are neat and clean, the food well cooked and well served. DR. JOS. F. BARTON, Dept. of Natural Science,
C. V. State Normal School, Shippensburg, Pa."

When you come to St. Louis to see the great Exposition you will surely stop at the Christian Endeavor Hotel, where you will have a safe, convenient, comfortable and happy home in the midst of congenial associations and surroundings. Now is the time to arrange for rates at the hotel. Write at once for booklet giving full particulars.

Christian Endeavor Hotel and Auditorium Co.,
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TENNESSEE QUEENS

Daughters of Select Imported Italian, Select Long-Tongue (Moore's), and Select Golden, bred 3¼ miles apart, and mated to Select Drones. No impure bees within 3 miles, and but few within 5 miles. No disease; 31 years' experience. All mismated queens replaced free. Safe arrival guaranteed.

	Price before July 1st.			After July 1st.		
	1	6	12	1	6	12
Untested	$ .75	$4.00	$7.50	$ .60	$3.25	$ 6.00
Select	1.00	5.00	9.00	.75	4.25	8.00
Tested.........	1.50	8 00	15.00	1.25	6.50	12.00
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Select Breeders ....$3.00 each

Send for Circular.

JOHN M. DAVIS, Spring Hill, Tenn.

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Bees For Sale.

About 50 colonies of Italians and Hybrids, with young and prolific queens, in 8-frame hives. Will sell, to reduce my number, at $4.50 each; 5 or more, $4 25 each. Address,

36A4t **M. H. LIND, Baders, Ill.**

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WANTED

Fancy Comb Honey from White Clover,

in no-drip cases, at once. State your lowest price for **SPOT CASH**, the average weight of honey per comb, all definite and final in first letter. We answer mail and pay for goods promptly. Plenty of references if desired.

C. M. SCOTT & CO.

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Our scholastic training is equal to the best, our reputation first-class. All expenses for a year, aside from the clothing and traveling, less than $20[illegible].00. Co-education, health conditions, morals and religious influence, superior.

Send for catalog.

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HONEY AND BEESWAX

When consigning, buying or selling, consult

R. A. BURNETT & CO.,

199 SOUTH WATER ST. CHICAGO, ILL.

40 Years Among the Bees,

BY DR. C. C. MILLER.

Free as a Premium for Sending Two New Subscribers.

The book contains 328 pages, is bound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with over 100 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard.

The first few pages of the new book are devoted to an interesting biographical sketch of Dr. Miller, telling how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters, and shows in minutest detail just how Dr. Miller does things with bees.

HOW TO GET A COPY OF DR. MILLER'S "FORTY YEARS AMONG THE BEES."

The price of this new book is $1.00, post-paid; or, if taken with the WEEKLY **American Bee Journal** for one year, BOTH will be sent for $1.75.

Or, any present regular subscriber to the American Bee Journal whose subscription is paid in advance, can have a copy of Dr. Miller's new book *free as a premium* for sending us **Two New Subscribers** to the Bee Journal for one year with $2.00. This is a magnificent offer, and should be taken advantage of at once. For many of our readers it is not only an easy way to earn a copy of the book, but at the same time they will be helping to extend the subscription list of the old American Bee Journal, and thus aiding also in spreading the best kind of apicultural information among those who would be successful bee-keepers.

Address all orders to

GEORGE W. YORK & CO.,
334 Dearborn Street, CHICAGO, ILL.

has to be sold at a sacrifice, because at the time of the sale it is leaking, possibly candied, and the actual net return is only a half or a fourth what it would have brought if the honey had been scraped and graded.

Sometimes we get some beautiful fancy honey put up in second-hand cases, or cases that are soiled and dirty, making the whole lot look poor. If they were new cases, but simply soiled, a small piece of sandpaper on a block of wood will make them look almost new in two minutes' time; but if the cases are second-hand, and roughly sawn—well, there is nothing to do but to recase. Commission men say, and our own experience goes to corroborate it, that a good case well made, carefully nailed, *and clean*, will make the honey bring enough more to pay for three or four good cases, where, if it is a poor one, it knocks the price down on the whole consignment, no matter how well it may be scraped and graded. In saying this, I may be accused of "grinding our own ax", because, forsooth, we make and sell ship-

CONVENTION NOTICES.

National at St. Louis.—The annual session of the National Bee-Keepers' Association for 1904 will be held in September, at St. Louis, Mo.

Sept. 27 and 28 will be devoted to Association work and its interests. We expect many prominent foreign bee-keepers to be present on these days.

Sept. 29, National Day.

Sept. 30, Inspectors' Day. Twenty bee-inspectors from all over the United States and Canada are counted on to introduce and discuss "The Diseases of Bees," etc.

Mr. N. E. France will exhibit, in the Convention Hall, a large map of the United States, Canada, Cuba and Europe. Each State and Country will have a shelf attached to the map with a one-pound sample of each kind of honey produced. Many other exhibits of special interest will be shown.

We expect to see the largest gathering of bee-keepers ever held in this country. A more detailed program will appear later.

GEO. W. BRODBECK, Sec.
Los Angeles, Calif.

Missouri.—The Missouri State Bee-Keepers' Association will meet Sept. 26, in St. Louis, in the same hall to be used by the National Bee-Keepers' Association. Further particulars later. Arrangements are being made for our accommodation by C. P. Dadant, in connection with the National Association.

Wakenda, Mo. W. T. CARY, Sec.

Wanted.—The Western Illinois Bee-Keepers' Association will meet in the Court House at Galesburg, Ill., Tuesday, Sept. 20. All who are interested in bees are cordially invited to attend. The convention will begin at 9 o'clock a.m., and last all day. E. D. WOODS, Sec.
J. E. JOHNSON, Pres.

Illinois.—The Western Illinois Bee-Keepers' Association will meet in Galesburg, Ill., Tuesday, Sept. 20, in the County court-room. All bee-keepers in the vicinity are invited to attend.

Galesburg, Ill. E. D. WOODS, Sec.

New York.—The Fulton and Montgomery Counties Bee-Keepers' Society will hold their next meeting at the Central Hotel, Market St., Amsterdam, N. Y., on Tuesday, Sept. 20, 1904, at 10 a.m. All who feel interested in bees or honey are cordially invited to be present.

West Galway, N. Y. T. I. DUGDALE, Sec.

Wisconsin.—The committee on arrangements for the Northeastern Wisconsin Bee-Keepers' Association met Sept. 1, and the following program was formulated for the next annual meeting, which will be held at the Opera House, in Mishicot, Oct. 25, 1904:

How can we increase the demand for honey?—J. COCHEMS.
Winter feeding of bees.—C. W. VOIGT.
Bee-pasturage.—DR. J. B. RICK.
Laws relating to the adulteration of honey.—A. S. CHLOUPEK.
The cause of spring dwindling—FRED TRAPP
Question-box.

Mishicot, Wis. DR. J. B. RICK, Sec.

ping-cases, but that is not the motive. But it does hurt our business when bee-keepers fail to get good prices, and honey is a drug on the market.

But this is not all. No matter how much honey may be properly graded and scraped, if it is left on the hive till it is travel-stained it is liable to be lumped off as No. 2. Of course, we bee-keepers know that honey that has been on the hive for some time after it has been gathered, acquires a richness that it will not have if taken off at once. But that is not the point. The public demands, and will pay a better price for clean white goods than it will for soiled and dirty honey that possibly may have a better flavor; for of this fact the public knows nothing, and it therefore has no weight. People are in the habit of buying by sight; and if the goods do not *look* as good as the best they do not want them.

I tell you, brother bee-keepers, and I say it with all kindness, if you but *knew* how much good money you are losing sometimes, under the delusion that it does not pay to scrape or grade, you would reform your ways very soon. Pick out an honest commission house or honey-buyer, then follow his suggestions. Do not imagine that you know more about it than he does as to what the public wants and will pay for.

And, again, do not send your No. 2 and off grades to market—better by far sell around home, where you can explain that your travel-stained honey is just as good as or even better than the "Fancy white" which you ship to the city. If the sections are poorly filled out and unscraped you will probably get a better price by cutting the combs out entirely and mixing with them a good grade of extracted honey, and selling to your neighbors as bulk comb honey. But do not attempt to ship this to the northern cities, at least, where it will be sold as a glucosed concoction.

Now, dear friends, if you will take these suggestions in the spirit in which they are written, you and the honey-man in the city will both profit; and you will at the same time stimulate the comb-honey market. There is no trouble at all in selling No. 1 and "Fancy" comb honey—bear that in mind.—Gleanings in Bee-Culture.

WANTED!
Comb and Extracted
HONEY
On Commission.
Boston pays good prices for a fancy article.
F. H. FARMER,
182 Friend St., BOSTON, MASS.

Please mention Bee Journal when writing.

WANTED—Come Honey, Wholesale.—Will buy your crop outright, cash at your depot anywhere in the U. S., if price and quality are right. We have salesmen in nearly every market in U. S., but buy only through Thos. J. Stanley, Manzanola, Colo., our honey-man who spends the season in the West superintending our apiaries and looking after Western car-lots of honey. Address us there direct, stating what your honey is gathered from, what grade, the average weight of section, how packed, color, etc.; quantity, when you can deliver, and lowest cash price per pound properly crated and delivered to your depot. Would like to know about what the freight rate to your nearest city. We believe that our purchases are larger than any other firm or association. Yours for business, THOS. C. STANLEY & SON,
29Atf MANZANOLA, Otero Co., COLO.

HONEY AND BEESWAX

MARKET QUOTATIONS

Chicago, Sept. 7.—The market is now showing more activity. Some small lots of fancy white clover have been sold at 14c per pound, with No. 1 ranging at 12@13c; very little call for other graoes. Extracted, white, brings 6@7c; amber, 5@6c, according to quality, flavor and style of package. Beeswax 28@29c.
R. A. Burnett & Co.

Kansas City, Sept. 8.—The honey market has improved a little, but prices are not advancing as fast as we expected. Fancy comb honey is selling slowly at $3.00 per case. No. 1 moving readily at $2.75, but there is very little demand for amber and the darker shades of stock. The extracted market is slow at 6@7c. Beeswax in good demand at 30c.
C. C. Clemons & Co.

Cincinnati, O., Sept. 7.—The tone of the comb honey of this year's stock is becoming stiffer, producers claiming it to be not so plentiful and therefore ask higher prices. I quote fancy white comb honey from 13½@15c.

Extracted is showing no change. Amber, in barrels, 5¼@5½c; in cans, ½c higher; water-white alfalfa in cans, 6½c; fancy white clover, in barrels, 6½@8c. Beeswax more plentiful, and brings 28c per pound. C. H. W. Weber.

Boston, Aug. 20.—The honey market is in a very unsettled condition; or, rather, we might say that the absence of any demand practically makes no market. As a general thing, we do not look to see a demand until from the middle of September to the first of October. By this time, cooler weather creates a certain demand. Prices at this time are, therefore, practically normal. The very finest thing is bringing 16c and from that down. Stocks are coming in very slowly, but that is to be expected at this time.
Blake, Scott & Lee.

New York, Sept. 8.—Arrivals of new crop comb honey are very light as yet, none to speak of, nor does there seem to be much demand as yet and prices are unsettled. We think, however, that when arrivals begin to be more plentiful, within the next 10 days or 2 weeks, there will be a demand for fancy white at 15c; No. 1, at 14c, and No. 2 at 12@13c.

Extracted honey is selling fairly well at 6@6½c for white, and 5½c for light amber and amber, and dark at 5c. Southern average quality in barrels, at 52@58c per gallon.

Beeswax dull and declining; choice grades selling at 28@29c. Hildreth & Segelken.

Cincinnati, July 15.—The supply of honey at the present time is limited, with but moderate demand. New honey is beginning to arrive. We quote our market to-day as follows: Amber extracted in barrels and cans, 5¼@6½c; white clover, 6½@8c. Comb honey (demand limited), 13@14c for fancy and No. 1. Beeswax, 29c. The Fred W. Muth Co.

Albany, N. Y., Aug. 25.—Honey demand improving some now. Receipts of new crop are light as yet, but we hear of quite liberal offerings at country points, indicating lower prices later when the "behind time" fellows get their crop ready. We quote fancy white, 16@17c; A No. 1, 15c; No. 1, 14c; mixed and buckwheat, 12@14c. Extracted, white, 7@7½c; buckwheat and mixed, 6@6½c. H. R. Wright.

Philadelphia, Sept. 7.—Very little comb honey has arrived in the market as yet, but extracted honey has come in quite freely for the last two months, both from the South and West. There seems to be quite a crop of extracted honey throughout the country. Comb honey has not all been graded up yet, and we can hardly tell at this early date definitely about the price. We quote: Fancy comb, 15@16 cents; No. 1, 14@15c; amber, 10@12c; extracted, white, 7½@8c; amber, 6½@7c; dark, 6c. Beeswax, 27c.

We are producers of honey and do not handle on commission. Wm. A. Selser.

San Francisco, Aug. 17.—White comb, 1-lb. sections, 12½@13c; amber, 9@11c. Extracted, white, 5½@6c; light amber, 5@5½c; amber, 4@4½c; dark amber, 3¼@3¾c. Beeswax, good to choice, light, 28@30c; dark, 26@27½c.

The first noteworthy shipment by sea for some time was made the current week, a steamer taking 200 cases extracted for Germany. Market for amber grades is without special firmness, but tendency on water-white honey is to better average prices than have been prevailing the past season.

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National Bee-Keepers' Convention, St. Louis—Sept. 27-30

AMERICAN BEE JOURNAL

MASSACHUSETTS AGRICULTURAL COLLEGE.

44th Year. CHICAGO, ILL., SEPT. 22, 1904. No. 38.

Officers of the Texas Bee-Keepers' Association.

A "BIG FOUR" FROM TEXAS.

W. H. LAWS, President.

LOUIS H. SCHOLL, Sec'y-Treas.

(See page 644.)

H. H. HYDE, Assistant Sec'y-Treas.

W. H. WHITE, Vice-Pres.

7%

We believe that every reader of the American Bee Journal is open to reason. That every one will make his decision without prejudice.

Why do we give a discount? Like all other questions this one has two sides. **Your** side and **ours.** To clear the matter a little we will first tell why we give a discount, and then will try to explain why you should take advantage of it.

Almost every business has a rush season and a dull one. To make the conditions balance is a never-ending problem.

Roughly speaking our busy season lasts 6 months of a year and the dull season the balance. To keep from running at a loss during the dull season is what taxes our strength. One expense, for example, is a pay roll of 250 helpers which must be met and it does not decrease much during these months. This is not the only item by any means nor do these expenses apply to ourselves only, but to every branch house and agent that sell our goods. This is why we are anxious for business during this season. And to obtain these orders is why we give discounts. September is the dullest month, and when we make our best offer.

What is the advantage of buying supplies before you need them? This is the bee-keeper's side of the question.

One of the advantages is our discounts. Just for convenience we will assume that **$100.00** will cover your requirements for supplies. You don't need them before April 1. We will suppose that you have the money and buy your supplies this month. You receive as a rebate $7 00. Your money in the bank for 6 months at 4 percent would bring $2.00. Thus you have a clear $5.00 to your credit. If you have to borrow money you can figure in a minute what you earn. Can you place your money where it will bring larger returns? Seven percent for 6 months is 14 percent for one year. The last figure is more than the profits of an average business firm. A **good** farmer nets no more. How can the bee-keeper afford to miss it?

Aside from the mere discount there are many other savings to be considered.

Are you working all winter? Like ourselves you find it best to keep busy during the slack season. Your time can be used to an advantage then in nailing and painting your hives and making ready your supers. Why not do it? Then there is always an advantage in being prepared. Very few are successful otherwise. For lack of forethought you may lose your crop or swarms for want of supers and hives. Have you ever been vexed by not receiving your supplies when they are needed? Why repeat the experience?

It is a positive fact that the majority of bee-keepers do not give their bees the attention that their possible profits warrant.

The larger number of bee-keepers take the profits from their bees as being mere luck. This is why so many put off ordering supplies to the last minute and run the risk of failure. Make your bees pay by giving them intelligent thought and attention. In the last number of the **American Bee Journal** you will find complete details regarding our discounts. It's costly to put off what you can do to-day.

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GEORGE W. YORK, Editor. CHICAGO, ILL., SEPT. 22, 1904. Vol. XLIV—No. 38.

Editorial Comments

Go to St. Louis in Good Time.

Not a bad plan, if you can arrange for it, to go in advance of the time for the bee-keepers' convention, next week. That will give you a chance to take in the big show, or at least a part of it, beforehand, and then give your undivided attention to the convention.

There's no disputing that it interferes no little with the attendance at the convention to have such an attraction as the big Exposition going on at the same time; but there are compensations. The low rates that can be had only in connection with some other great attraction will bring bee-keepers from a greater distance than if full fare had to be paid. Also, they will come from greater distances and in greater numbers to attend the big show and the convention together than they would to attend the convention alone. So, on the whole, we may expect a better convention than we would have with no big show in the way.

Don't Increase Number of Colonies Too Late.

The beginner finds it so easy to make increase by artificial means that he is tempted to continue it late in the season. To be sure, a nucleus may be built up by having given to it a frame of brood and bees from each of several colonies, and these colonies will scarcely feel the shock, recovering from it in a short time; but if this be done quite late in the season the shock will be greater and the recovery not so perfect. Beginners will do better to keep on the safe side. Better have one colony good and strong than two so weak that one or both will succumb before spring.

The Best Time for Superseding.

A queen may be superseded at any time of the year when bees are active; but all times are not alike. It is a sad interference with the honey crop, usually, to have a queen superseded just before the beginning of the harvest. The best time is toward the close of the main honey harvest. At that time an interim without any laying is not a loss, for the bees resulting from that laying would be too late for the harvest. There is an advantage, however, in the laying a little later on, for that makes a lot of young bees to winter well and have a sufficient span of life to do good service the following spring. An old queen seems to be somewhat tired out from her arduous labors during the season, and may stop laying quite early, much earlier than a queen which has just been set up in business.

What shall be done, then, to get the bees to supersede their queens in the early fall? Nothing; fortunately nothing. A wise providence seems to have ordered so that nearly all the superseding is done at the very time when the best interests of the bee-keeper require it. Let us be thankful that those who think it best to leave to the bees the matter of renewing their queens may also safely leave to them the choice of the time for such renewal.

The Different Kinds of Bees.

The article, "Many Species of Bees", on another page of this number, contains statements that will be a surprise to many. How many of us have ever noticed a dozen different kinds, to say nothing of hundreds? And is it not strange that among so many there should not be a number of them storing honey enough to be worth while? Still stranger is it that the one kind stands so far off in that respect from all others.

Perhaps it is just as well that one species is all the apiarist has to do with. So many puzzling problems are constantly coming up in the study of that one species, that if he had the 1877 or more other species to puzzle with, it would make him go crazy.

Shall the Bees or the Bee-Keeper Renew Queens?

This is a mooted question. Possibly that everywhere prevailing factor—locality—may have something to do with it. Some say that when bees are left to themselves there is so much loss from failing queens at the very time when their work is most needed, that it is better on the whole to replace every queen at the close ot its first full season of work. Others say that with them the rule is that when the bees do not think it wise to supersede a queen somewhere near the close of a season, such a queen may be relied on to do as good, or even better, work the second season. The beginner may do well to observe, and perhaps experiment, for himself.

Pure Food Laws Needed.

On another page in this number will be found a communication from Dr. G. Bohrer, whom the older readers will remember as being a prominent bee-keeper many years ago. It is a pleasure to welcome him back to our ranks. His example of informing the people through the local press is worthy of general imitation. If bee-keepers are not interested to make the truth known, who are?

He is also right in the idea that in every state there should be rigid laws to safeguard the people against the danger of buying under a honey-label anything other than the pure article stored by the bees. A law of this kind, however, will not be easily obtained if it applies to honey alone. It will be much easier to secure a general pure-food law, and it will be just as effective against the adulteration of honey as if it referred to honey alone. The pure-food law of Illinois, for example, is a case in point. A pure-food commissioner makes it his business, supported by able assistants, to look after cases of adulteration, honey among other things, and as a result adulterated honey is no longer placed upon the market as it was. If a law were passed referring to honey alone, it would be idle to think of having a set of State officers appointed with the duty of enforcing the law. No effort should be relaxed until every State in the Union has on its statue books a good pure-food law.

Miscellaneous Items

Mr. L. L. Andrews, of Riverside Co., Calif., called on us last week when in Chicago for a few days. He reports no honey in his locality this year—in fact, it will be necessary for bee-keepers there to feed. Mr. Andrews will attend the St. Louis convention.

* * *

"Facts About Bees and Honey"—the article on page 581 by J. E. Johnson, is being copied by local newspapers, as we suggested would be a good thing to do. The Sauk County (Wis.) News published it in full, Sept. 1. Mr. W. P. Just, one of its proprietors, is a bee-keeper, and evidently knows a good thing when he sees it. We trust that more newspapers will copy the article.

* * *

Geo. W. Brodbeck, of Los Angeles Co., Calif., secretary of the National Bee-Keepers' Association, has again been very sick, so that he will not be able to attend the St. Louis convention. This is greatly to be regretted, for all wanted him there, and he doubtless was even more anxious to be present. We trust he may speedily recover his health, and meet with the National again at some future time.

* * *

Rev. M. Mahin, D.D., of Henry Co., Ind., wrote as follows, Sept. 9:

> "I will be 80 years old Oct. 22, and take as much pleasure working with my bees, and in reading the American Bee Journal, as ever. And I preach whenever I am called upon. My wife and I will soon celebrate our 61st wedding anniversary (Oct. 31)."

Dr. Mahin is one of the oldest readers of this Journal. We wish him and his still many more years of useful service.

* * *

Wisconsin and Minnesota Bee-Keepers to St. Louis.—Mr. L. F. Hanegan, of Glenwood, Wis., writes as follows about taking a carload of bee-keepers to the St. Louis convention next week:

> I am planning to get together a car of bee-keepers to go to the St. Louis convention, to leave St. Paul at 8:35 a.m., Sept. 26, via Chicago. If we get 20 members we get a car direct to World's Fair gates from here without change. Car-fare for the round-trip is $13.00; no sleeper. Sleeper can be had Chicago to St. Louis for $2.00. Already a goodly number are planning to go with coach party. Any one can join this car at any point on the Wisconsin Central Railway, or at Chicago. L. F. Hanegan.

Those who are interested and can possibly join with the proposed car of bee-keepers from the Northwest, should write to Mr. Hanegan *at once*. It will be a great trip for all who can join in the company.

Sketches of Beedomites

OFFICERS OF THE TEXAS ASSOCIATION.

These are pictured on the first page this week. Concerning this "Big Four" we may speak as follows:

W. H. LAWS.

Mr. W. H. Laws, of Bee County, is the president, having been elected to that office at the last meeting in July. He is well known to the bee-keeping fraternity as of queen-breeding fame. Many will know him as the author of the use of the Baby Nucleus for mating queens, with which thousands of queens are mated satisfactorily. As a bee-keeper he has been successful for he has made some money out of the business.

Mr. Laws has a hive-factory of his own and makes his own hives and fixtures, and also for some of his neighbors. A gasoline engine is used for power.

Mr. Laws is a fine man, upright in stature and very pleasant in manner. He is well liked by the bee-keepers of the State, and in electing him as President of the State Association they have chosen wisely, and have secured a man who is well qualified to fill the chair in a convention hall.

W. H. WHITE.

Mr. W. H. White is Vice-President of the Association, having been elected at the last meeting. He is another fine Texas bee-keeper, like the president, and the two will take good care of the presidential chair during their term of office.

While Mr. Laws represents his district from the far Southwest Texas country, Mr. White represents the far Northern portion of the State, residing in Lamar County. Here he has a steam bee-hive factory where thousands of feet of lumber are cut up into bee-hives and other fixtures the year around.

LOUIS H. SCHOLL.

Mr. Louis H. Scholl, of Brazos County, is still the secretary and treasurer of the Association. Who does not know him? He has been a contributor to the columns of the bee-papers as an advocate of the divisible brood-chamber hive with which he has had splendid success. The Hyde-Scholl separators, gotten out in 1898, are well known to the section-honey producer, and reference has been made to the extensive collection of the Texas Honey-Flora on which he has been working for several years.

Mr. Scholl holds the office as Apiarist and Assistant Entomologist of the Agricultural and Mechanical College of Texas, with which he has been connected since 1902, and there he has charge of the State apicultural work.

For 7 years he has held the office of Secretary of the State Bee-Keepers' Association, and although he has tried to resign on account of being "too busy", he has not been allowed to step out. That is just the kind of a man that is wanted, hence he has to stay.

H. H. HYDE.

H. H. Hyde was appointed as Assistant to the Secretary-Treasurer of the Association at the last meeting. Until recently Mr. Hyde has been one of the members of the Hyde Bee Co., of Southwest Texas, but he now resides in San Antonio where he has charge of the new Falconer Southwestern Branch House of bee-keepers' supplies. He will also deal in bees and honey on a large scale.

Mr. Hyde has always been very enthusiastic as a bee-keeper, and as a queen-breeder he has gained quite a reputation. His name is attached to several useful appliances used in bee-keeping, namely, the Hyde-Scholl separator, which is now being so extensively used in the South; the Hyde-Gill hive-cover for warm climates; and the Hyde foundation fasteners for putting brood-foundation in deep frames.

The foregoing are quite a quartette of " big bee-men ", for they are not only big as bee-keepers, but as nearly all of them are over 6 feet in height, the reader will understand what we mean. They simply grew in proportion to their State—Texas—of which they are so justly proud. Yes, Texas does not only produce good honey in big quantities, but big bee-men also.

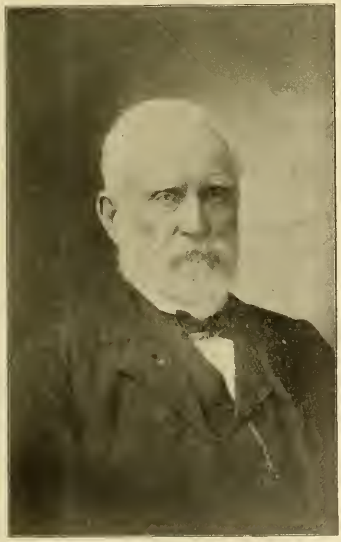
Then, the pictures also show that they are handsome looking fellows. Who would have thought it after hearing so much about the "Wild West", and the fellows with their yellow breeches, their six-shooters, their long hair, and—horns?

They are all expected to be at the St. Louis meeting of the National Bee-Keepers' Association, so those who are going would better take another look at them, so as to recognize them when seen there.

Yes, they will be at St. Louis, and they will have with them a pressing invitation for the National to meet in Texas next year. And they look as if they would get almost anything they go after!

DR. G. BOHRER.

Dr. G. Bohrer, of Rice Co., Kans., whose picture appears herewith, was an intimate friend of Rev. L. L. Langstroth, and one of his patrons, having purchased an Italian queen of him as early as 1864. Dr. Bohrer also defended Father Langstroth when assailed by those who infringed on his hive patent and denied his being the inventor of the first really movable-frame hive.



DR. G. BOHRER,
President Kansas State Association.

Dr. B. moved to Kansas in 1873, from Indiana, on account of disabilities contracted while in the army during the Civil War. He found Central Kansas comparatively free from malarial influence, being a sufferer from malarial poisoning. That part of Kansas was not adapted to bee-keeping as early as 1873, hence he dropped out of the ranks of bee-keepers. But now fruit-blossoms, alfalfa and other nectar-yielding plants are becoming abundant, and every promise of satisfactory success in apiculture is afforded, so he is in line again. He was chosen president of the Kansas State Bee-Keepers' Association when it was organized some time ago, which position he still holds.

We understand that Dr. Bohrer expects to attend the National Convention at St. Louis next week. If he is there he will probably be one of the oldest members, having been present at the very first meetings of the Association in the early '70's. We will all be glad to see him.

Convention Proceedings

Report of the Fourth Annual Meeting of the Texas State Bee-Keepers' Association, Held at College Station, Tex., July 5 to 8, 1904.

REPORTED BY LOUIS H. SCHOLL.

(Continued from page 631.)

Mr. O. P. Hyde read the following paper on

THE LAWS BABY NUCLEUS FOR MATING QUEENS.

I see that I am on the program for criticism of the Laws nucleus. I wish to say in the first place that I have no earthly use for it. I have seen hives of which their inventor said they were the very thing. After I had examined and tried them I decided that they were no good to me except for feed boxes or to make hen's-nests. But the Baby nucleus under consideration is too small for either. All the use that I could put it to was for kindling wood.

Why do I make the above assertions? I make them for many reasons. When I first heard and read of the Baby I knew that it would not do. I know it this year from experience. My son bought 150 of them. I did not know anything about it until they were at the depot. He praised them so much that we took them out.

The next thing to do was to put them in use. He had to destroy about 50 or 75 good, full-sized combs to fill the little frames. It was no small job, as each had to have some honey and part of the comb empty. It is hard to find such combs without much loss.

Next he had to start plenty of queen-cells, so each could have a cell. Next they had to be "peopled" from the strong colonies. This was all done in good shape.

Some time later I was out at one of the apiaries where there were 50 of these little nuclei. To my surprise there were not less than 40 of them lying down on their sides and only an occasional bee passing out. I went to work to see how many good queens I could find, and found bees in only three that were trying to stay, and not a queen in either of them.

So, in a short time I was making a round with the boys and found all of the little things piled up and the frames were all tiered up on full colonies, and they are there today. The boys said that they did not get a single queen out of the whole 150.

We have about 75 of the right kind of nuclei in use, and these are the regular 3-frame Langstroth size. With these we have reared all of our queens to replace all those that were failing. So you can see from the above how I stand on the little nuclei.

But there is one more point, if nothing else would obliterate it from the face of the earth, and that is that there is not enough comb-surface. The queen will be cramped the first days of her laying life, and to keep a queen from laying at her full capacity the first two or three weeks of her life, she will never thereafter be a prolific queen.

My honest opinion is that if you use the Laws Baby nucleus you will never have good, prolific queens.

I should be glad to hear from others on the last point.

O. P. HYDE.

Mr. Weaver said that one trial was no fair test.

Willie Atchley thinks that they are good sometimes, and not good at other times; that they can't be relied on during a season that is not exactly favorable. If everything is just right queens can be reared and mated in most any way.

Mr. Laws arose to defend the use of these little mating boxes, and told how they were first gotten out, and how he had successfully used them. Besides, they are used with the greatest of success by many queen-breeders in the country. He thought that the criticism of Mr. Hyde was rather too severe, and unfounded, as he had not given them a fair trial. He also explained their modus operandi.

The inventor of this little mating box was C. B. Bankston, who was then a queen-breeder near Beeville, and who successfully mated hundreds of queens where only a few could be mated in the old way. He did not make it public, however, as he wanted to try it more thoroughly before doing so. At one time Mr. Laws offered him $50 if he would tell him the secret of how he managed this mating and what his method was. Mr. Bankston declined the offer.

Mr. Laws then went to work and tried the mating with small boxes, and was the first to give it to the public in such a way that it was a benefit to the bee-keeping world. Therefore we owe the praise to him for giving it to us so that we could make use of it.

He had with him one of the little nucleus boxes as he uses them, and explained how they were used. The small frames that he uses are shallow frames just long enough so that they will hang inside and crosswise of an 8-frame super. Thus they are kept when not in use.

When you want to use them, after you have the cells ready, take a strong colony that is to be used for the purpose, and with a little cup dip a cupful of bees into each of the little nuclei. A cell is stuck on each of the little combs, and then the whole is closed up. Virgin queens can be put in instead of cells if you have them.

When you have fixed all of them they are taken out into the country several miles away from all undesirable drones, and there they are simply thrown under bushes or along the fence where they are out of the hot sun. The entrances, of course, having been opened.

Here they are left until the queens are mated, when they are taken out after they have laid a few days, and new ones are run in if virgins are to be used. Otherwise cells are given. In this way several hundred queens can be mated with the bees from a single colony. This is far superior to the old way of having large nuclei. These are too expensive to use. The little nuclei were left out for months and all through the winter last year.

John W. Pharr, of the New Century Queen-Breeding Company, gave a talk on the use of these little mating boxes, and convinced the bee-keepers present that they were a success. He has used them for several years, and mates hundreds of queens with them successfully, and would not rear queens without them.

His little frames are of such a size that he can put six of the small ones into the inside of a regular Langstroth frame, and keep them over a strong colony.

A little nucleus was exhibited, all complete with bees and queen. These are nothing but little boxes that are closed all around with a lid hinged at the top. On this is a leather handle to carry it by, and when in use and a young queen is to be mated he simply hangs it up somewhere on a barbed-wire fence, on the limb of a tree, or some other thing, until the queen is mated.

The boxes are prepared just as Mr. Laws prepares his, by putting in the comb, bees, and the cell, or a virgin queen.

Mr. Pharr has his boxes painted—some red, some white, and others blue, so that the queens do not get mixed up in going to the wrong home.

H. H. Hyde said that really they had not given the little nucleus a thorough trial, and that his father was a little too severe in his paper on the subject. He will have them tried again and note the results.

(Continued next week.)

Contributed Articles

Apiarian Exhibits at World's Fairs—Honey Trade-Marks.

BY J. M. HAMBAUGH.

I second Mr. Dadant's motion on page 469, relative to the National making exhibits of the apiarian products of the United States at all world's fairs in the future. It seems to me there is a long-felt need for some mode of advertising and appropriate distribution, with methods that will place our products more thoroughly in the hands of the consumer, and by so doing increase the consumption. I believe the National Bee-Keepers' Association can be instrumental in doing much good along the line mentioned by Mr. Dadant.

What are the conditions of the markets to-day relative to honey, especially extracted? Go to our city restaurants and hotels, and how often do you see it placed upon the table or on the bill of fare?

"Buckwheat cakes and maple syrup." Yes, brother bee-keepers, and now why do these spurious concoctions usurp the place of our beautiful, health-giving honey? Is it not partially our own fault?

Let us go to all our leading grocery stores, and take a look at the situation. These are the great distributing centers to the consumers, and the wide-awake merchant caters to the trade, and will "push" those articles that he can turn into money the quickest, and with the least exertion. Upon his shelves can be seen fancy "Tea-Garden Drips," "Vermont Maple Syrup," and various other sweets, put up in fancy packages of various sizes, highly ornamented with attractive pictures and lettering calculated to catch the eye. These packages are an ornament to his shelves, and a pleasure to sell, and put up in quantities to suit the trade. And now, brother bee-keepers, isn't it about time we were getting into the band-wagon? Of course we have the adulterators to fight, but it seems to me that here is work for the National and various State organizations, in coöperation with its members, to overcome this poisoned sentiment, and gain the confidence of the public. We trust the National meeting at St. Louis in September will thoroughly discuss this matter. My idea of a mode of procedure would be as follows:

Let the National issue a trade-mark under government protection, to be given to every honey-producer that is a member of the National Bee-Keepers' Association, to stamp each and every package of honey that is put upon the market, under conditions that his own private brand is to be used in connection therewith. Let every State Bee-Keepers' Association also issue a trade-mark under patent for the use of its members in the same way. These certified trade-marks of absolute purity accompanying each and every package of honey, will evidently give it prestige and standing before the public, and win the confidence of the consumer.

Should these trade-marks be too expensive for the National to give to each member, those that desire their use can well afford to pay something for them. This will be an incentive for every honey-producer in the land to join the National. It will also give each and every honey-producer a chance to build up a trade based on the absolute merits of the honey he puts upon the market, and he can well afford to cater to the wants of the public by putting it in various-sized packages, embellished with catchy advertisements, etc., and in the event that any member of these organizations is proven guilty of adulteration, let him be blacklisted, published to the world, and expelled from these associations.

I give these ideas for what they are worth, and trust they will be deliberated upon at the coming National Bee-Keepers' meeting.

Churchill Co., Nev.

Pure Food Legislation a Necessity.

BY DR. G. BOHRER.

I am now looking forward to the pleasure of attending the convention at St. Louis, where I hope the bee-keepers of the country will unite in taking an advance step in the matter of securing legislation in all our States against the sale of glucose either in its pure state, or adulterated with honey. Millions of people believe that there is but little pure nectar put upon the market. They think nearly all the honey is adulterated, or that there is no nectar at all in much that is put up in neat packages and labeled "Honey." Much of which is too true.

It occurs to me that if we select a strong committee from each State—those in particular that have no law upon this subject—and urge them to correspond with influential bee-keepers all over each State, requesting them to write to or see their members of both the House and Senate, in as many counties as possible, such a law might be secured in most, if not all, of the States. A law of this kind would restore confidence among our people, and result in the sale of very much honey that now remains without a buyer. Then there is a great shortage of true knowledge among many people, about the construction of honeycomb by the use of machinery, which they think is filled and sealed by the honey-producers of the country. The truthfulness concerning this matter, it seems to me, beekeepers should attack through the local press in each county. I have done so here in Rice County, and also through the agricultural papers of the State, and have made a standing offer of $1,000 for one 4¼ x 4¼ section of comb manufactured by machinery, filled and sealed by human hands.

If the masses of intelligent bee-keepers continue to remain inactive (or comparatively so) the uninformed will continue to remain so very largely, and the honey-producer will suffer as a result.

I have been out of the bee-business so long that until I re-entered the apiarian field again I lost sight, to quite an extent, of the way in which the honey-trade was being injured. Thirty-one years ago glucose was not used in combination with honey, as it is now.

I am glad to be back in line again. I would have been long ago, but for a lack of bee-forage. Now we have quite an amount of alfalfa—more than 150 acres within a radius of seven miles, and not over 35 colonies of bees to gather honey from it. I had nine colonies in the spring, and now have 23.

It was too cold and wet to gather much honey from fruit-bloom, so that I fed them probably 150 pounds of sugar syrup to stimulate them. Within the last 15 days both old and new colonies have filled their brood-chambers, and the old colonies have filled one set of supers, and are now at work in the second set. I, of course, put comb foundation in all empty frames and supers. Some colonies are crowding out their queens, so that I will be compelled to use an extractor. If the season holds out as it now promises to do there is no telling how much they will store. I never saw anything like it before.

We put a glass dish containing a little smartweed honey sticking to the sides and bottom, on one of the hives in my apiary. It set there two days, and not one bee went near it, which is something unusual, and to my mind tends to prove that bees like alfalfa (aside from its abundance in the case) better than smartweed or heartsease, as it is called by most people.

Why not at the National convention at St. Louis, in September, make it a point to select a committee from each State which has no law against the adulteration of honey by combining it with glucose or other liquid sweets, and selling and exposing the same to sale under the label of honey? That this is being done to an extent that has been, and now is, preventing the sale of many tons of honey annually, there can be no reasonable doubt among that class of people who are familiar with the production and sale of honey in the United States of America. Many people have been led to believe that extensive honey-producers buy glucose by the carload, and feed it to their bees, that store and seal it in their combs, in which shape it is put upon the market as pure nectar, when as a matter of fact they tell us it is not nectar at all. Others tell us that bee-keepers manufacture comb with machinery made for the purpose, and fill this comb with glucose, sealing it by artificial means, and sell it for honey. Still another class tell us that honey dealers combine large quantities of glucose with a small quantity of honey put up in glass jars and other receptacles, then put a nicely gotten up honey-label on it, and put it on the market. This latter method of defrauding the public is a fact.

The statements that comb is manufactured by the use of machinery, filled with glucose and sealed by bee-keepers, and that glucose is fed to bees on a large scale, is false from start to finish. At any rate, I have never known bees to store glucose, and have never talked with a bee-keeper who ever saw or knew of their doing anything of the kind.

The object, then, of such a committee as has been referred to, is to work up an interest in each State, and through a co-operative movement upon the part of bee-keepers and others interested in the sale of pure honey, as well as to teach people the actual truth about this matter, and to punish parties for counterfeiting honey and defrauding the masses. Ask each State legislature to place upon its respective statute books a stringent law against such abuses. This would be but a modest, reasonable, and just demand upon the part of the people, and it is a request that each State assembly will grant if it is once really known that the people want such a law, and it is shown just how they are being imposed upon by these counterfeiters and imposters. In the meantime there may be members of the National and State bee-keepers' associations who are engaged in this dishonorable business. If so, they should be searched out, and the constitution and by-laws so shaped as to require their prompt expulsion from the society, and their conduct publicly exposed.

A course of this kind will restore confidence upon the part of people, who, as matters are, will not buy honey for fear of being imposed upon, but who will buy when sure that they can purchase the pure nectar.

If, Mr. Editor, you know of a case, or ever heard of a case through reliable sources, in which bees stored glucose and sealed it, please give the facts in detail to the public. I feel confident that the truth in the case will shame his Satanic majesty, no matter in what part of the wood-pile he may be hiding.

Rice Co., Kans.

Honey Market Quotations in Bee-Papers.

BY EDWIN BEVINS.

In the editorial on "Honey Market Quotations," on page 563, the Editor says that he has received a letter which shows the side of those who furnish the honey and beeswax market quotations. I beg leave to say that it shows a side of only a part of those who furnish these quotations—the part which buys for cash, and not the side of the commission men. The Editor seemed to understand, as I did—and I suppose most honey-producers did—that the quotations were the prices at which honey sold, and not the prices which some men dealing in honey and giving quotations, pay for it. The writer of the letter referred to says, "The market reports, apparently, are a delusion to the bee-keeping fraternity." These reports were not a delusion until a lot of men began furnishing them without giving the public any information regarding their manner of doing business.

You say, Mr. Editor, that you supposed that those who read the market quotations in the bee-papers understood that the prices given are the ones dealers secure for the honey after they receive the shipments. So I understood; and I supposed most honey-producers understood it the same way, and it is only within the last few days that I have been undeceived. This matter of honey quotations needs some airing.

I recently wrote to a honey-dealer in Cincinnati, asking what he would give for fancy white clover honey in cans. He replied that for such honey he would pay 6 cents, delivered in Cincinnati. Under date of Aug. 6 the same dealer quoted amber extracted honey in *cans* at 6 cents, and fancy white clover in barrels at 6½ to 8. Why such a wide difference? and why any difference at all in price of fancy white clover honey? It seems to me that honey all of one grade should bring a uniform price. If the honey brings 6½ to 8 cents in barrels, we can only, in the absence of quotations, infer that it would bring a little more in cans. Such quotations are either carelessly or designedly misleading. Which?

Again I ask, What are these quotations worth to the honey-producer? Mr. Fred W. Muth, in his letter to the Editor, remarked that honey quotations in the bee-papers had evidently become a delusion to the bee-keeping fraternity. In view of the facts just related it looks as if they may also have become a snare.

It has developed recently that there are two classes of men in the cities who furnish honey quotations to the bee-papers, viz.: the commission man and the man who buys to sell again. Some bee-keepers, I suppose, have sent honey to both classes in the belief that the honey would be sold and an account of sales rendered, and that they would receive what the honey sold for, less freight charges and the usual commission.

If they have sent honey to the honey-buyer on the strength of his quotations, and with this expectation, and without previous correspondence and a previous understanding, it is my belief that some bee-keepers have been disappointed with the returns for their honey. The quotations for the different grades of honey sometimes vary considerably, and the man who sends the best honey to the market has a right to expect the best price for it. In sending to the honey-buyer without a previous understanding with him, I will say, however, that the seller is liable to be greatly disappointed. The buyer, to whom the honey is sent, has the sender at his mercy, in a great measure.

If the buyer has been quoting a certain grade of honey, say from 6 to 8 cents, it matters not that the honey you send is the best of that grade—you cannot help yourself if the price you received is the one lowest quoted. Even if the honey-producer corresponds with this class of honey-dealer, and thinks he is sure of getting fair treatment, I feel tolerably certain that he will not always receive the satisfaction he looks for, unless in every instance the buyer is a straight up-and-down man.

I believe there is greater risk in dealing with the honey-buyer, unless you know your man, than there is in dealing with the firms and men doing a commission business. The buyer may be honest, and he may be solvent, and again he may be neither. If the commission man defrauds you he becomes in law a criminal—the buyer does not.

Decatur Co., Iowa.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Experience with Bees, Rendering Beeswax, Etc.

Under the inspiration of a perusal of the instructive American Bee Journal we became enthused with the idea of owning an apiary. Accordingly we purchased one formerly owned by a resident of this city. She conducted this very successfully for a number of years, until God called her Home. We found many hives containing dead bees and many old combs of granulated honey, with only nine full colonies. We cleaned them up, arranging them as best we could, and early in the season when there was not much for bees to gather, we allowed them to extract at their own sweet will all the honey in the old combs. Possibly this was not wise, and some may say that it encouraged robbing. But it certainly resulted in an increase of colonies for other bees began coming to us, and during the swarming season one, two and once three swarms came to us in a day. Our own colonies were not very strong and did not swarm very much, but we increased to 32 colonies.

I never heard of so many bees coming and going. The farmers place empty hives at different points in the woods, and one man caught 27 swarms in this way. But there are no sweets without some stings, and the best remedy we find for them is to break off stems of milkweed and apply immediately, following with a hot paste of antiphlogistine over night to draw out the swelling.

Our first harvest was 60 pounds of extracted pure sweet clover honey, and 30 pounds of comb from four supers; next we took off 42 pounds of extracted from two supers on one hive; next 52 pounds from three supers. This is as thick as tar and very sweet and transparent.

We are green at the work, and tried to bundle up well to take off the honey, and use no smoke. But after finding that the bees were cross, and that we got many stings and phrenological developments, we used the smoker, which quieted them and set them to eating, while we walked off with the spoils.

Where can I get a book on the use of honey as a food or for culinary purposes, also for making exhibits at fairs? I can readily see that the study of the methods, ways and manipulation of the busy bee requires years of experience, observation and hard work.

After one has read, studied and asked all the crazy questions conceivable, and thinks he is well armed for the fray, he gets all the conceit taken out of him when he bumps up against an unthoughtof problem.

My little girl, seven years old, who is away on a visit, writes me that she "would like to come home and milk the bees, if some one would pull out the slivers first." I find there is no true excellence without labor, and he who would succeed must first buffet the rough waves of experience, and suffer many reverses and—slivers.

What is the best method of rendering beeswax, and is there anything that can be used to whiten it, especially old combs from the hives, and also the best way to clarify or strain?

We enjoy the American Bee Journal, and but for its many instructions would never have dared to embark in this sweet business.

Mrs. B. J. Wade.

Woodbury Co., Ia., Aug. 9.

Your plan of leaving the depopulated hives for the bees to clean out, certainly worked well in your case, seeing the material increase you secured. Indeed it is often, if not always, a good plan to allow bees to take the honey from hives out of which the bees have died, unless it be so that the neighbors' bees get the lion's share. At times when there is nothing to gather in the fields such a course is a great stimulus to the bees, and some have gone so far as to take combs of honey from the bees and put them a short distance away, purposely to let the bees rob the honey back again.

You ask for a book on the use of honey as food or for culinary purposes. Probably the nearest to such a book is a leaflet on "Honey as a Health Food," written by Dr. Miller and published at the office of the American Bee Journal. It is also included in the book, "Forty Years Among the Bees."

Perhaps the best thing to use for extracting wax is the German steam wax-press. Less expensive is the solar wax-extractor, although it does not get out the wax so clean.

A simple and inexpensive way for small quantities is thus given in "Forty Years Among the Bees":

> "An old dripping-pan (of course a new one would do) has one corner split open and that makes the extractor. The dripping-pan is put into the oven of a cook-stove, with the split corner projecting out. The opposite corner, the one farthest in the oven, is slightly raised by having a pebble or something of the kind under it, so that the melted wax will run outward. A dish set under catches the dripping wax, making the outfit complete. Of course the material to be melted is put in the pan, the same as in the solar extractor."

To clean wax perhaps all that is easily practicable for you is to keep it liquid for a considerable time, so that the impurities shall have plenty of time to settle. One way is to put it in the oven of the range or cook-stove, let it melt, then let the fire die down, close the oven door, and leave it all night, taking out next morning before starting the fire. Then scrape the impurities off the bottom of the cake.

The 8-Frame vs. 10-Frame Hive.

In deciding between 8-frame and 10-frame or larger hives, a factor that deserves respectful consideration is the difference in the weight of supers—at least for those of the sisters who work for comb-honey. This summer the writer has had to handle supers more than usual, and when tired out at the close of a hard day's work, the thought would come, "Well, I'm tired; but I'd be a good deal more tired if the supers were 25 per cent heavier, as they would be with 10-frame hives." Of course there are other things to be considered, especially safety in wintering, and in that respect the larger hives have decidedly the advantage.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

CLIPS A LEG INSTEAD OF THE WING.

Ah, Mr. Broderick doesn't claim that clipping a wing will suffice to make bees supersede their queen! It was a leg he clipped. How nicely that musses up the outpouring of wisdom which I indulged in over it! The correction puts the thing on an entirely different basis; but it still leaves it an important suggestion, which will make some racket, I reckon. The vials of wrath from the clippers will have to be suddenly corked; but now the anti-clippers will take a hand. Shall we chop our queens up piecemeal—butcher them to make a Roman (honey) holiday? I don't think I should enjoy performing this manipulation—although I do not say I would not under any circumstances do it. Page 564.

HONEY IN BOARDING HOUSES.

So Arkansas finds that the boarding houses of a city of 25,000 cannot be made to buy honey. Here's a kettle of fish that we might as well look into. No doubt about the experience being a genuine one; and we may well suspect that a similar state of things prevails very widely. The keeper of a boarding-house is not in the business for her health. She experiences hard-scrabble and small profits; and her first look-in at the proposition is: "Here's an extra expense for no purpose." Is she right? Well, she's not altogether wrong. Honey, to get into her house easily, must offer itself as a substitute for something. Extracted honey is the natural substitute for syrup; and the abominably poor quality and lack of sweetness realized in grocery syrups is one of our strongest helps. Why won't this avail at the boarding house as well as at the private family? With patience and perseverance it will, to some extent, in time, but not much just now. The habit of never buying honey is among the greatest of all adverse winds. Let us consider a little. She don't want to fuss with two different kinds of liquid sweets on the table at the same time—what will happen if she leaves off the syrup and puts on extracted honey? One-third of her crowd don't eat honey, some claiming, either as a whim or as a reality, that they can't eat it without pain, and they will complain bitterly at the substitution. Here we are "up a stump;" and it's a big stump not easy to pull.

The situation as to section honey is also, from our point of view, unsatisfactory. The vender of honey wants to say: "More honey and less butter;" but it doesn't work that way. Honey greases the runners of the sled on which the butter slides down—and takes at least one extra biscuit along with it. Possibly some day this will come to be regarded as a thing of course; but not just yet it isn't. When habit comes to work for us, instead of working against us, that will be a happier day. Also when nearly all the private families come to have honey on the table regularly the better class of boarding houses will be driven in, so to speak. Page 553.

BEES MARKING THEIR LOCATION.

I feel like putting in a mild protest or query, nominally founded on the editorial note, page 564, but really hitting in a great many other spots as well. When we say bees leave off marking location after the first trip, are we not repeating things after one another rather than stating the exact facts? Granting that they take more pains on a first trip, it still seems to me that bees *most of the time* circle 'round a good deal when leaving home. They like to do so I guess, it's so easy and natural. Or is it like the dog's turning 'round in a circle before he lies down—one of the things no fellow can find out?

Poising and reciprocating back and forth closely in front of the hive is also some of the time marking the location; but it has various other objects and reasons, I take it.

PACKING POLLEN IN CELLS.

Yes, I suppose we may as well climb down and admit that most of the pollen-packing is not done on the battering-ram plan, but by the bees' mandibles. A battering-ram sort of motion would be frequently seen were that the style. Still, it being pretty hard to prove a negative, Mr. Arthur C. Miller hardly proves they *never* give it a little bit of a bunt "just for greens." That prepared pollen "would completely clog these organs," is hardly established. Sometimes wet clay completely clogs our hands; but other times we can manipulate it with ease without clogging. Page 565.

BUCKWHEAT TIED AND UNTIED.

So, in "Pennsylvania's" locality, buckwheat is never tied! Here, in Ohio, it is tied close to the top, after being set up on end in sub-conical shape. It is not tied with such a tie as is given to a bundle of wheat—but sufficient to help it stand up, and keep it from scattering around. Our way better than t'other. Page 569.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Dividing—Queens in the Mails—Finding Queens—Extracting-Combs—Drawn Foundation.

1. I have 12 double hives full of brood and honey (in both stories). Would it be advisable to divide them, giving one a young queen? I would like the increase.

2. Does it injure a young queen-bee to be sent through the mails this time of year?

3. Can you give any suggestions to a novice as to how to find the queen?

4. Is there a way to get combs for extracting next summer before the flow?

5. How can I get the bees to draw out foundation (wired frames)? Iowa.

Answers.—1. Getting pretty late for that sort of thing, especially for a novice; so it might be well for you not to try it on many.

2. This time of year is probably as good as any. Sometimes a queen in badly injured by a journey through the mails, while often she seems none the worse for it.

3. Experience is the best thing. After some practice you'll spot a queen on a comb very readily. Don't do anything to set the bees to running. If they get to running, you may as well close the hive till another time. The two things most likely to set them to running are too much smoke and too rough handling. So use just as little smoke as will keep the bees under subjection, and be slow and gentle in all your movements. G. M. Doolittle says that from 9 o'clock till 3 the queen is most likely to be found on the outside comb that has brood in, either on one side or the other. If you lift out two or three frames and set them in an empty hive, that gives you

room in the hive to glance over one side of each comb before you touch it at all. That is, when you lift out a frame, before carefully looking it over, glance over the exposed side of the next frame in the hive. Often you may see the queen thus in the hive, when with gentle haste you will put down the frame in your hand and lift out the one with the queen. After looking over the combs two or three times without finding the queen, it is generally as well to close the hive till an hour or two later, or till another day.

4. You can get combs drawn out only when bees are storing, either from a natural flow or from feeding, and even them they will draw out combs no faster than they fill them.

5. Just the same as getting any combs drawn out, by giving them to the bees when they need them to be filled either with stores or brood.

Queen Entering Wrong Hive on Returning from Bridal Trip.

1. What are the signs, indications and manners of bees when they are disposed to accept a strange queen? And what are their manners when they are not?

2. I find that one of my colonies has mixed bees in it, and evidently has a different queen from the one that has been in the colony all along. My hives set in rows 15 feet apart, and are set in pairs in the rows. There are about 80 in all. Last April I placed a Carniolan queen-cell in a hive of natives that I found queenless. Shortly afterward I examined the hive, and found that the queen had hatched. A month or so after this I had occasion to examine this same hive, and found it queenless again. I supposed the young queen got lost while off on her bridal trip. About the same time I discovered that a hive that sat in front of this queenless colony had mixed bees in it, and on examination it was evident that a different queen had entered it, for about half of the bees were of a different race, and resembled hybrid Carniolans. What do you think of that? A young queen returning from her bridal trip and entering the wrong hive! Is it possible that bees under such circumstances will receive a strange queen? Could it have been that this particular colony was queenless at the time, and in a mood to receive any queen that might come along? All of the bees in these 80 colonies are brown, with the exception of two colonies, and these have old, fertile queens in them—one a Carniolan and the other an Italian. These two queens would have no occasion to leave the hives, except to swarm. And there is no possible way in which a queen could have gotten into this hive in any other way than the one I have mentioned. Please tell me what you think of this. MISSISSIPPI.

ANSWERS.—1. A sensible question, yet one that hardly needs to be answered to those with some experience, for I suspect that as good a guesser as your next question shows you to be would readily judge as to the behavior of the bees without being told. If the bees are kindly disposed to the queen, they will appear to stroke and caress her, perhaps climbing over her at the same time, but no one will take hold of her. If hostile, they will grab hold of the queen, and appear as if trying to sting her—in reality they will not sting her—and if very unfriendly one after another will seize the queen till there is no room for any more to get hold of her, when they will seize the bees that have hold of the queen, and you will thus have a case of balling the queen. Then you must release the queen, either by throwing the ball of bees in water, or by blowing on them smoke that is cold; for if you hold the smoker close enough to blow hot smoke on them you will make them sting the queen.

2. Yes, you've made the right guess. A young queen may enter the wrong hive; and what's more, even an old laying queen may of her own accord change her domicile, issuing with a swarm and then entering the wrong hive.

What Ails the Bees?—Introducing Queens.

1. What is the matter with bees when in coming out of the hive (that is in the late autumn, midwinter and early spring), they pass large quantities of a thick yellow matter on the front board of the hive, sometimes like long thread?

2. What is the best and easiest way to introduce a queen?

3. Which is the best time to introduce a queen, just before the swarming season, during the swarming season, or immediately at its close? NEW ZEALAND.

ANSWERS.—1. They are merely emptying the contents of the intestines, which accumulate when they are confined for any length of time to the hive.

2. There are so many best ways that it is hard to say. Besides, even the best of the best ways is likely to be a failure sometimes, for bees are freaky things. There is, however, one way by which you may be successful without fear of failure. Have some combs of hatching sealed brood—one way of getting them ready is by putting combs of brood mostly sealed over an excluder for eight days or more. Put these frames of brood in a hive without allowing a single bee with them, and put in your queen, closing up bee-tight, and keep in a warm place for five or six days. Then set the hive on its permanent stand, leaving the entrance for a few days only large enough for a single bee to pass.

3. That depends upon circumstances and your own desires. It is better to choose a time when honey is yielding well, whatever the time of year. Other things being equal, perhaps as good a time as any is near the close of the honey harvest. Less danger then of interfering with the harvest.

The American Bee Journal and Gleanings in Bee-Culture

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GEORGE W. YORK & CO., CHICAGO, ILL.

FROM MANY FIELDS

Black Medick.

I am a mailing a plant that I would like to have named. If it reaches you without getting smashed you will see that it resembles white clover very much, only that the blossoms are yellow, about the color of golden-glow, and the seeds are in clusters about the shape of a head of clover, and each seed is on a stem by itself, and not in pods like clover. I found this plant and one other in a patch of white clover I sowed last spring.

C. H. HARLAN.

Kanabec Co., Minn., Aug. 29.

[The plant belongs to the same family as the clover, and is called Black Medick. It originally came from Europe, but grows well in this country.—C. L. WALTON.]

Very Poor Season—Too Much Swarming.

We had a very wet spring here, followed by a dry spell, and bees have done very poorly.

Last fall I packed my bees away for winter with all kinds of clothes in the supers. I then had 45 colonies, and the first of May I had only 23. I think they swarmed too much, as I had about 80 swarms. I have not taken off over 50 pounds of honey, all told. The supers are all full of comb, and partly full of honey. The bees have begun to store a little honey now, and I think we will get some yet. We got all our surplus last fall in September and October. I made all my own hives.

B. N. DOUGHERTY.

Monroe Co., Ohio, Sept. 6.

Rear-End Feeder—Bees Have Paid Well.

When I read of Mr. Irvine's rear-end feeder, page 619, it brought to mind a story I heard when a small boy. A farmer told his hired man to feed the mules corn in the ear, and upon hearing an unusual noise in the barn he went out to find that the man was

IF YOU INTEND TO KEEP MORE

BEES

Next year, a bargain is now offered you to obtain strong, reliable stock for increase. The bees are as fine a strain as there is in America. I have bought queens from all the best breeders, and spent much time in developing a strain that excelled in honey-gathering, hardiness, gentleness, and white-capping.

For $7.00 I now offer goods for which I have been receiving $12.00.

I will ship, for $7.00, a young Select-Tested Italian Queen of above strain, value $2.00, in a full Italian colony of 8 frames bees and brood (value $7.00), sufficient honey to winter on ($1.65 at lowest valuation); all in a new dovetailed, painted hive, Root's make (55c); a bottom-board (35c) and a strong cover, covered with painted Neponset roofing (45c); all making a total value of $12.00, which, as before said, will be shipped for $7.00. Everything in best condition. No bee-disease has ever been known in this locality. Safe delivery and satisfaction guaranteed. Please don't delay, but order at once.

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6 DARTMOUTH ST.,
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Root's Goods at Root's Prices.

Everything used by Bee-Keepers. POUDER'S HONEY-JARS.
Prompt Service.
Low Freight Rates. NEW CATALOG FREE.

WALTER S. POUDER,
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STRAWBERRY AND VEGETABLE DEALERS

The Passenger Department of the Illinois Central Railroad Company have recently issued a publication known as Circular No. 12, in which is described the

best territory in this country

for the growing of early strawberries and early vegetables. Every dealer in such products should address a postal card to the undersigned at DUBUQUE, IOWA, requesting a copy of "Circular No. 12."

J. F. MERRY, Asst. Gen'l Pass'r Agent.

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Bee-Keepers Don't forget that we are the largest jobbers in the United States of *Root's Bee-Supplies, Johnson Incubators and Brooders, Humphrey's and Mann's Bone Cutters, Poultry Supplies of all kinds, Seeds and Implements.* Remember, you get these goods at Factory Prices, and save half the freight. Let us book your order for Golden Italian, Red Clover and Carniolan *Queens;* listed in our Catalog. Send for Free Illustrated Catalog.

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Are Perfect in Workmanship and Material.

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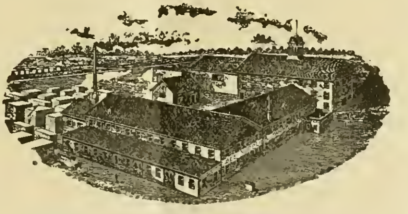

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Located on Oakland Avenue on the South side of the Exposition within 100 feet of one of the entrance gates to the Fair Grounds, and on Market Street car line running from the Union Station direct to the hotel. It is a mammoth structure covering 5 acres of ground, 3 stories in height, with a capacity of 3000 people daily. Every room is an outside room, and handsomely and comfortably furnished. There are wide verandas, a large rotunda, offices, parlor, numerous baths, concessionary rooms, United States Post Office, a lunch counter, restaurant and dining room with a seating capacity of 1500 people. The hotel is endorsed by the Clergy, World's Fair Official Bankers and Merchants in St. Louis, as well as having the approval of the Christian Endeavorers. We are frequently in receipt of testimonials like the following:

"TO WHOM IT MAY CONCERN:—This is to certify that I have been at the Christian Endeavor Hotel for 7 days with a party of 161, and desire to state that we have been well pleased with the accommodations. The management is courteous, the rooms are neat and clean, the food well cooked and well served. DR. JOS. F. BARTON, Dept. of Natural Science, C. V. State Normal School, Shippensburg, Pa."

When you come to St. Louis to see the great Exposition you will surely stop at the Christian Endeavor Hotel, where you will have a safe, convenient, comfortable and happy home in the midst of congenial associations and surroundings. Now is the time to arrange for rates at the hotel. Write at once for booklet giving full particulars.

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RETAIL AND WHOLESALE,

Has an established reputation, because made by a process that produces the **Cleanest and Purest, Richest in Color and Odor, Most Transparent and Toughest**—in fact, the best and most beautiful Foundation made. If you have never seen it, don't fail to send for samples. Working wax into Foundation for Cash a specialty. Beeswax always wanted at highest price. A full line of **SUPPLIES,** retail and wholesale. Catalog and prices with samples free on application.

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24A48t No. 75. Birmingham, Alabama.

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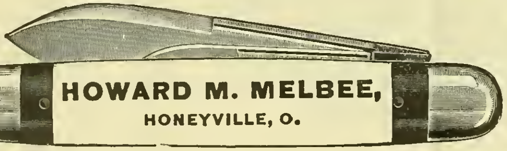
The Novelty Pocket-Knife.

Your Name and Address on one side—Three Bees on the other side.



[THIS CUT IS THE FULL SIZE OF THE KNIFE.]

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last-time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00.) We will club the Novelty Knife and the Bee Journal for one year, both for $2.00.

GEORGE W. YORK & CO. Chicago. Ill

☞Please allow about two weeks for your knife order to be filled.

pounding corn into the mules' ears This new feeder may be ahead of everything now, but when it comes to work it will not be ahead of the bee.

I have kept some bees for years, and would not be without them. I keep an itemized account of all receipts and expenditures connected with the bees, and as a whole I think they have paid me well, and we have had all the honey we could use ourselves besides. I am a great lover of honey. This year the yield has been but about 67 pounds per colony of comb honey.

CHAS. ALBERT.
Dane Co., Wis., Sept. 13.

Indian Turnip.

Will you please tell me what the enclosed seed is? L. NUSBAUM.
Iberia Co., La.

[The seeds are those of the Indian turnip. The juice is extremely acrid, and one taste of the turnip-like bulb will not soon be forgotten.—C. L. WALTON.]

Not a Good Season—Demand Greater than Supply.

I had 14 colonies, spring count. To date they have stored an average of 10 pounds per colony.

I do not think this season has been a very good one here, as it was too wet and cold all spring, and too dry at present for a fall flow. The thermometer was 93 degrees here yesterday, and the nights are very cool for this season of the year.

The only trouble I have is that I can't get honey enough to supply the demand. I can sell all I have at my apiary for 25 cents per pound.

I could not get along very well without the American Bee Journal and the good information I get in it from other bee keepers. It comes regularly every week. Long may it live!

W. C. EDGEWORTH.
Pulaski Co., Ark., Sept. 11.

Sneezeweed or Helenium Autumnale.

Please tell me the botanical and common name of the enclosed flower. The bees visit it sometimes. It is a wild flower which I found in this vicinity. It is a perennial plant, and beautiful in in its growth. KATE V. AUSTIN.
Wayne Co., Ind., Sept. 7.

[In Farmers' Bulletin No. 86, which gives a description of 30 poisonous plants of the United States, the plant is called sneezeweed, staggerweed, swamp sunflower, and several other names descriptive of its various qualities. The botanical name is Helenium autumnale. The flowers secrete a poisonous substance which sometimes proves fatal to cattle and sheep. The bitter taste of cow's milk or even the butter may be due to this weed growing in the pasture. It is not probable that bees get much honey from the flower.—C. L. WALTON.]

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Daughters of Select Imported Italian, Select Long-Tongue (Moore's), and Select Golden, bred 3¼ miles apart, and mated to Select Drones. No impure bees within 3 miles, and but few within 5 miles. No disease; 31 years' experience. All mismated queens replaced free. Safe arrival guaranteed.

	Price before July 1st. 1	6	12	After July 1st. 1	6	12
Untested	$ .75	$4.00	$7.50	$ .60	$3.25	$ 6.00
Select	1.00	5.00	9.00	.75	4.25	8.00
Tested	1.50	8.00	15.00	1.25	6.50	12.00
Select Tested	2.00	10.00	13.00	1.50	8 00	15.00
Select Breeders						$3.00 each

Send for Circular.

JOHN M. DAVIS, Spring Hill, Tenn.

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Bees For Sale.

About 50 colonies of Italians and Hybrids, with young and prolific queens, in 8-frame hives. Will sell, to reduce my number, at $4.50 each; 5 or more, $4.25 each. Address,

36A4t **M. H. LIND, Baders, Ill.**

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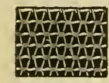

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☞ Passengers to New York, Boston, New England, and all eastern points will find it to their advantage to ascertain rates applying over the Nickel Plate Road and its eastern connections. Three daily trains, on which there is no excess fare charged. One special feature of the service is meals in dining-cars, on American Club Plan. Pay for what you get, but in no case over 35c. to $1.00 per meal; also service a la carte and Mid-day Luncheon 50c. Folders, rates and all information cheerfully furnished by applying to John Y. Calahan, General Agent, Chicago, Ill., Room 298, 113 Adams St. Chicago depot, La Salle and VanBuren Sts. 27—36A4t

65 Colonies For Sale!

Strong in bees, and mostly in 8-frame dovetailed hives with wired frames, and one super on each hive. No disease. Prices: In lots of 5, $4.00 each; or for the entire lot, at the yard, $3.50 each. Small quantity of dark honey for sale also. MRS. J. A. HIGHET,
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37A4t CHICAGO, ILL.

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BINGHAM'S PATENT Smokers
25 years the best.
Send for Circular.
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BEE-KEEPERS!

We manufacture SECTIONS, NO-DRIP SHIPPING-CASES, and are dealers in

Bee-Keepers' Supplies.

Write for low prices and catalog.

AUG. LOTZ & SON,
24A17t CADOTT, WIS.

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Beedom Boiled Down

Bee-Keeping as a Business.

In reply to the query, "What will best mix with bee-keeping?" I have always replied: "Some more bees." When the conditions are favorable, I am decidedly in favor of bee-keeping as a specialty—of dropping all hampering pursuits, and turning the whole capital, time and energies into bee-keeping. If bee-keeping can not be made profitable as a specialty, then it is unprofitable as a subsidiary pursuit. If bee-keeping must be propped up with some other pursuit, then we better throw away bee-keeping, and *keep the prop.*

General farming is very poorly adapted for combining with bee-keeping, yet the attempt is probably made oftener than with any other pursuit. There are critical times in bee-keeping that will brook no delay, when three or four days' or a week's neglect may mean the loss of a crop, and these times come right in the height of the season, when the farmer is the busiest. Leaving the team and reaper idle in the back field while the farmer goes to the house to hive bees is neither pleasant nor profitable. Drawing in a field of hay, while the bees lie idle because the honey has not been extracted to give them storage-room is another illustration of the conditions with which the farmer-bee-keeper has to contend. The serious part of it is that the honey thus lost may be worth nearly or quite as much as the hay that is saved.

Some special lines of rural pursuits, like winter-dairying or the raising of grapes, or winter-apples, unite with bee-keeping to much better advantage than general farming; but when bee-keeping is capable of absorbing all of the capital, time and energy that a man can put into it, why divide these resources with some other pursuit?

It has been said that bee-keeping is a precarious pursuit that it can not be depended upon, alone, to furnish a livelihood, and, for this reason, it should be joined with some business of a more stable character. It is true that there are many localities where there is often a season in which little or no honey is secured, and, in the Northern States, winter losses are sometimes very heavy, hence it would be risky to depend entirely for a living upon keeping bees, in a *limited* way, in such localities; but, if the average profit from bee-keeping, one year with another, is not the equal of other rural pursuits, why keep bees? The truth of the matter is that it is *more* profitable; and if bee-keepers would only drop everything else, and adopt methods that would enable them to branch out and keep hundreds of colonies where they now have dozens, they would secure enough honey in the good years more than to carry them over the poor years, and thus not only make a living, but lay up money.

When a man decides to cut loose from everything else and go into bee-keeping extensively, making it his only and his life business, the question of all questions is that of locality. There are few localities in which a small apiary

Bees For Sale

with Queen-Rearing outfit, trade and fixtures. Information furnished on application. Address
JOHN W. PHARR,
37A2t BERCLAIR, TEX.

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Sweet Clover Seed
—FOR SALE—
50 lbs. or over, at 5 cents per pound. Address,
37Atf JOSEPH SHAW, Strong City, Kans.

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POUND
PURE
HONEY

Bottles, Jars, of every description ....
—FOR—
Honey-Dealers

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Manufacturers,
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ITALIAN QUEENS,
BEES AND NUCLEI.

Choice home-bred and Select Imported Stock. All Queens reared in full colonies.

One Untested Queen	$. 65
" Tested Queen	.90
" Selected "	1.10
" Breeder "	1.65
" Comb Nucleus (no Queen)	1.00

Imported Queens from $3 to $5

All grades ready now. Safe arrival guaranteed.

For prices on quantities and description of each grade of Queens, send for free Price-List.

J. L. STRONG,
204 East Logan Street, CLARINDA, IOWA.

WE SELL ROOT'S GOODS IN MICHIGAN
Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Beeswax Wanted for Cash.
M. H. HUNT & SON,
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$10,000 WE HAVE JUST COMPLETED OUR TEN THOUSAND DOLLAR BEE KEEPERS' SUPPLY MANUFACTURING PLANT

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CONVENTION NOTICES.

National at St. Louis.—The annual session of the National Bee-Keepers' Association for 1904 will be held in September, at St. Louis, Mo.

Sept. 27 and 28 will be devoted to Association work and its interests. We expect many prominent foreign bee keepers to be present on these days.

Sept. 29, National Day.

Sept. 30, Inspectors' Day. Twenty bee-inspectors from all over the United States and Canada are counted on to introduce and discuss "The Diseases of Bees," etc.

Mr. N. E. France will exhibit, in the Convention Hall, a large map of the United States, Canada, Cuba and Europe. Each State and Country will have a shelf attached to the map with a one-pound sample of each kind of honey produced. Many other exhibits of special interest will be shown.

We expect to see the largest gathering of bee-keepers ever held in this country. A more detailed program will appear later.

GEO. W. BRODBECK, Sec.

Los Angeles, Calif.

Missouri.—The Missouri State Bee-Keepers' Association will meet Sept. 26, in St. Louis, in the same hall to be used by the National Bee-Keepers' Association. Further particulars later. Arrangements are being made for our accommodation by C. P. Dadant, in connection with the National Association.

Wakenda, Mo. W. T. CARY, Sec.

Wisconsin.—The committee on arrangements for the Northeastern Wisconsin Bee-Keepers' Association met Sept. 1, and the following program was formulated for the next annual meeting, which will be held at the Opera House, in Mishicot, Oct. 25, 1904:

How can we increase the demand for honey?—J. COCHEMS.

Winter feeding of bees.—C. W. VOIGT.

Bee-pasturage.—DR. J. B. RICK.

Laws relating to the adulteration of honey.—A. S. CHLOUPEK.

The cause of spring dwindling—FRED TRAPP

Question-box.

Mishicot, Wis. DR. J. B. RICK, Sec.

Fine Breeding Queens, $2

Sample of Bees, free.

J. F. MICHAEL, RT. 1, WINCHESTER, IND.

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VIRGINIA QUEENS.

Italian Queens secured by a cross and years of careful selection from Red Clover Queens and Superior Stock obtained of W. Z. Hutchinson. I can furnish large, vigorous Untested Queens at 75 cents; after June 15, 60c. Tested Queens, $1.00; after June 15, 75c. Write for discount on large orders.

CHAS. KOEPPEN,

22Atf FREDERICKSBURG, VA.

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—IT PAYS—
to order your

Bee-Supplies & Winter-Cases

NOW, while we can serve you PROMPTLY, and get them at BOTTOM PRICES.

R. H. SCHMIDT CO., Sheboygan, Wis.

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Low Rates to Eastern Points

will always apply via Nickel Plate Road and its eastern connections to all points in New York, New England and eastern States. Three daily trains to Ft. Wayne, Findlay, Cleveland, Erie, Buffalo, New York and Boston. Standard equipment on all trains. Meals served in dining-cars on American Club Plan, ranging in price from 35c. to $1.00 per meal; also service a la carte and Mid-day Luncheon 50c. The eastern terminals of the Nickel Plate Road are only from three to ten minutes from all Ocean Steamship Docks, and the service afforded is first-class. No excess fare charged on any train. For particulars, call on or address J. Y. Calahan, General Agent, 113 Adams St., Room 298, Chicago, Ill. Chicago depot, La Salle and Van Buren Sts.

26—36A4t

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40 Years Among the Bees,

BY DR. C. C. MILLER.

Free as a Premium for Sending Two New Subscribers.

The book contains 328 pages, is bound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with over 100 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard.

The first few pages of the new book are devoted to an interesting biographical sketch of Dr. Miller, telling how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters, and shows in minutest detail just how Dr. Miller does things with bees.

HOW TO GET A COPY OF DR. MILLER'S "FORTY YEARS AMONG THE BEES."

The price of this new book is $1.00, post-paid; or, if taken with the WEEKLY **American Bee Journal** for one year, BOTH will be sent for $1.75.

Or, any present regular subscriber to the American Bee Journal whose subscription is paid in advance, can have a copy of Dr. Miller's new book *free as a premium* for sending us **Two New Subscribers** to the Bee Journal for one year with $2.00. This is a magnificent offer, and should be taken advantage of at once. For many of our readers it is not only an easy way to earn a copy of the book, but at the same time they will be helping to extend the subscription list of the old American Bee Journal, and thus aiding also in spreading the best kind of apicultural information among those who would be successful bee-keepers.

Address all orders to

GEORGE W. YORK & CO.,

334 Dearborn Street, CHICAGO, ILL.

might not yield some surplus, but when a man is to make of bee-keeping his sole business, the securing of the best possible location is time and money well spent. What a good, solid foundation is to a "sky-scraper," a good location is to the building up of a successful, extensive bee-business.

Having settled in a locality, the bee-keeper can not study it too thoroughly. Especially must he understand its honey-resources; the time when each flow begins, its probable duration, its quantity and character. He must know whether to expect a spring-flow, like that from dandelion, hard maple, or fruit-bloom, that will build up the colonies for the main harvest that is to come later. If there is likely to be a season of scarcity between the early flow and the main harvest, it must be known and preparations made to keep up brood-rearing by means of feeding or the uncapping of honey. The management will depend largely upon the source of the main honey-flow, whether it be raspberry, clover, basswood, buckwheat, alfalfa, sage or fall flowers. Whatever the source, the bee-keeper must know when to expect it, and plan to have his colonies in exactly the right condition to gather it when it comes. This is one of the fundamental principles of successful bee-keeping.

Having secured the most desirable location, the next step is to procure the best kind of bees that can be obtained. There are several different varieties of bees, each with its peculiarities, but, aside from this, every bee-keeper who has had experience with several strains of the same variety, knows that some strains are far superior to others—that there is scrub-stock among bees, just as there are scrub-horses, cattle, sheep and poultry. With scrub-stock, the cost of hives, combs and other appliances remain the same; it is no less work to care for such stock; and it requires the same amount of honey to rear and feed it as it does the best stock in the world. In proportion to its cost, no investment brings the bee-keeper greater profit than the securing of superior stock.

Having secured a good location, and good stock, the bee-keeper should adopt such hives, implements and methods as will enable him to branch out, establish out-apiaries, and keep a large number of colonies. At the present time the great failing of professional bee-keepers is the keeping of too few bees—of clinging to some other hampering pursuit. Many keep enough bees to furnish them a fair living in a good season, but when winter losses, and poor honey seasons follow one another in quick succession, there is suffering, or, at least, great inconvenience. If a man is going to follow bee-keeping as a profession, his only hope of success is in a good location, good stock, and the keeping of bees in such numbers that when a good year comes he can pile up the honey, ton upon ton—enough to keep him several years. The larger a business the more cheaply can it be conducted in proportion to the results; not only this, but the very fact that bees are scattered about in out-apiaries, several miles apart, adds to the certainty of the crop, as one locality often yields a fair crop while another only a few miles away yields nothing.

It has been urged against bee-keeping

as a sole pursuit that, while it keeps a man very busy during the summer it leaves him idle in the winter. Bee-keeping, rightly managed, will keep a man busy every day in the year. Too many bee-keepers fail to realize that the selling of a crop is fully as important as its production. The business part of bee-keeping has been sadly neglected. No set rule can be given as to how a man shall dispose of his crop, but it does seem like very poor business management to send away a crop of honey to some commission merchant, and then sit around all winter when good wages might be made selling honey direct to consumers, or to retail dealers. The selling of the crop, and the preparations for the coming season, may well occupy a man during the winter.

It should be understood, however, that bee-keeping is not an occupation in which one can easily become *wealthy*. In this respect, it is much like other rural pursuits. Rightly managed, in a locality adapted to the business, it can be depended upon to furnish a comfortable living, and perhaps enable a man to lay up a few thousands of dollars; but such fortunes as are sometimes amassed in merchandising or manufacturing can never be hoped for by the bee-keeper. Fortunately, however, the perfection of a man's happiness bears but little relation to the size of his fortune; and many a man with the hum of the bees over his head, finds happiness deeper and sweeter than ever comes to the merchant prince with his cares and his thousands.—W. Z. Hutchinson, in the Bee-Keepers' Review.

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HONEY
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Boston pays good prices for a fancy article.
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HONEY AND BEESWAX

MARKET QUOTATIONS

Chicago, Sept. 7.—The market is now showing more activity. Some small lots of fancy white clover have been sold at 14c per pound, with No. 1 ranging at 12@13c; very little call for other grades. Extracted, white, brings 6@7c; amber, 5@6c, according to quality, flavor and style of package. Beeswax, 28@29c.
R. A. Burnett & Co.

Kansas City, Sept. 8.—The honey market has improved a little, but prices are not advancing as fast as we expected. Fancy comb honey is selling slowly at $3.00 per case. No. 1 moving readily at $2.75, but there is very little demand for amber and the darker shades of stock. The extracted market is slow at 6@7c. Beeswax in good demand at 30c.
C. C. Clemons & Co.

Cincinnati, O., Sept. 7.—The tone of the comb honey of this year's stock is becoming stiffer, producers claiming it to be not so plentiful and therefore ask higher prices. I quote fancy white comb honey from 13½@15c.

Extracted is showing no change. Amber, in barrels, 5¼@5½c; in cans, ½c higher; water-white alfalfa in cans, 6½c; fancy white clover, in barrels, 6½@8c. Beeswax more plentiful, and brings 28c per pound. C. H. W. Weber.

Boston, Aug. 20.—The honey market is in a very unsettled condition; or, rather, we might say that the absence of any demand practically makes no market. As a general thing, we do not look to see a demand until from the middle of September to the first of October. By this time, cooler weather creates a certain demand. Prices at this time are, therefore, practically normal. The very finest thing is bringing 16c and from that down. Stocks are coming in very slowly, but that is to be expected at this time.
Blake, Scott & Lee.

New York, Sept. 8.—Arrivals of new crop comb honey are very light as yet, none to speak of, nor does there seem to be much demand as yet and prices are unsettled. We think, however, that when arrivals begin to be more plentiful, within the next 10 days or 2 weeks, there will be a demand for fancy white at 15c; No. 1, at 14c, and No. 2 at 12@13c.

Extracted honey is selling fairly well at 6@6½c for white, and 5½c for light amber and amber, and dark at 5c. Southern average quality in barrels, at 52@58c per gallon.

Beeswax dull and declining; choice grades selling at 28@29c. Hildreth & Segelken.

Cincinnati, Sept. 15.—There is an improvement in the honey market, so far as extracted honey is concerned. The demand has increased considerably, but the supply is limited, owing to the fact that bee-keepers in general are mistakably holding their crop for better prices. We quote amber extracted in barrels at 5½@6c; white clover in barrels and cans at 7@8½c, according to quality. The comb honey situation is badly demoralized, being aught but encouraging. Quote fancy white clover comb honey at 14@15c. Beeswax, 26@28c.
The Fred W. Muth Co.

Albany, N. Y., Aug. 25.—Honey demand improving some now. Receipts of new crop are light as yet, but we hear of quite liberal offerings at country points, indicating lower prices later when the "behind time" fellows get their crop ready. We quote fancy white, 16@17c; A No. 1, 15c; No. 1, 14c; mixed and buckwheat, 12@14c. Extracted, white, 7@7½c; buckwheat and mixed, 6@6½c. H. R. Wright.

Philadelphia, Sept. 7.—Very little comb honey has arrived in the market as yet, but extracted honey has come in quite freely for the last two months, both from the South and West. There seems to be quite a crop of extracted honey throughout the country. Comb honey has not all been graded up yet, and we can hardly tell at this early date definitely about the price. We quote: Fancy comb, 15@16 cents; No. 1, 14@15c; amber, 10@12c; extracted, white, 7½@8c; amber, 6½@7c; dark, 6c. Beeswax, 27c.

We are producers of honey and do not handle on commission. Wm. A. Selser.

San Francisco, Sept. 7.—White comb, 1-lb. sections, 12½@13c; amber, 9@11c. Extracted, white, 6@6½ cents; light amber, 5@6c; amber, 4@4½c; dark amber, 3¼@3¾c. Beeswax, good to choice, light, 29@30c; dark, 27@28c.

For choice to select water-white the market is unfavorable to the buying interest, stocks of this description being exceedingly light. Common grades are rather plentiful, and are not meeting with any very active demand, although as a rule they are being steadily held.

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American Bee Journal

MASSACHUSETTS AGRICULTURAL COLLEGE.

44th Year. CHICAGO, ILL., SEPT. 29, 1904. No. 39.

Officers of the National Bee-Keepers' Association for 1904

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GENERAL MANAGER N. E. FRANCE.

OUR new edition of the A B C of Bee Culture is progressing finely. We expect to have the first copies ready in the coming December. Already we have orders booked for a large number. If you want a copy promptly you had better let us have your order now. Old price: $1.00, postage 20c extra.

THE Root Correspondence School is going to be a success. The readers of The American Bee Journal will remember that we make a special offer to them of the course for $10.00 to a limited number. Ask for our prospectus and particulars.

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IN October the discount on our bee supplies is 6 per cent. Every month you wait it will be less. It's a saving to anticipate your wants. It pays to be ready.

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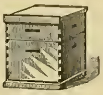
AMERICAN BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

GEORGE W. YORK, Editor. CHICAGO, ILL., SEPT. 29, 1904. Vol. XLIV—No. 39.

Editorial Notes and Comments



Orange Blossom Honey.

E. B. Rood expresses surprise in the American Bee-Keeper that W. S. Hart should have thought that not a barrel of pure orange-blossom honey had ever been shipped from Florida (as mentioned on page 483). Two years ago Mr. Rood extracted 30 pounds to the colony, and previously A. F. Brown extracted 50 pounds per colony that must have been almost pure, for nothing but orange blossoms were within reach to yield an appreciable amount of honey at the time.

Division of Labor Among Bees.

E. F. Phillips, Ph.D., says in Gleanings in Bee-Culture that a young worker-bee has the entire eye well covered with unbranched hairs, making it seem practically blind; and he thinks that blindness rather than instinct accounts for the fact that it does no field-work till 16 to 20 days old, when almost every hair is removed from its eyes. Looks like a reasonable supposition, and yet when no older bees were present workers 5 or 6 days old have been known to gather stores.

No Need to Strain Extracted Honey.

E. D. Townsend, of Michigan, says in the Bee-Keepers' Review:

> No matter how much you strain honey, it needs skimming, anyhow, so the straining does not help any; besides, it requires some work to arrange a practical strainer. Then there is the washing, and care; more work all for nothing. The gates to our tanks are now placed close to the bottom. When we first began using tanks, we worked on the principle of drawing out the *center*, so the gates were placed 4 inches above the bottom; but we soon found that there was *nothing settled to the bottom*, so now we place the gates clear to the bottom and this allows us to draw that much more honey before the scum begins to come through the gate.

Bacteria—Kinds and Importance.

When a bee-keeper hears the words *bacteria*, *microbe*, or *micro-organism*, it is in perhaps most cases with the thought only of something destructive, suggesting foul brood, typhoid fever, consumption, etc. But it is not true of these microscopic plants that they are all baneful, any more than it is true of plants of larger growth. Because one is poisoned by handling poison ivy it does not follow that he must wear gloves to pick apples or currants. Neither are most bacteria deadly enemies because one of them produces foul brood. The fact is that out of the many hundreds of the different species of bacteria, abounding everywhere in air, water, and soil, but a comparatively few are harmful to man.

Some who read these lines will probably change to some extent their notions about bacteria after reading the following very instructive extract from an article by Prof. R. M. Bundy, in the American Bee-Keeper:

> Bacteria are simply a class of low plants. They are the active principle in many of nature's processes and are as necessary to our life as the blood in our veins. They are the cause of putrefaction or decay of all animal and vegetable substances. They enrich the soil by a process of nitrification in a way that cannot be done by artificial means. They are the curing agents of the farmer's hay in the mow, as well as his fodder in the silo. In the dairy they are of great importance, the souring of milk being caused by the action of bacteria, converting the sugar of the milk into lactic acid. The ripening of cream and its changes into butter, and the ripening of cheese are the direct results of bacteria growth. It is to their powers of producing chemical changes during their growth that they owe their importance in the world.

Paste for Labeling Tin or Wood.

The American Pressman, a printers' paper, gives the following in response to an enquiry as to paste for sticking labels on tin or wood packages:

> Mix 4 ounces of rye-flour with 1½ ounces of clean powder sugar in cold water, until they form a smooth cream; cut up an onion (about as large as a good-sized white plum) into small squares and drop them into a pint of boiling water, letting them remain there for one minute, after which pour in the boiling water (skimming off the onion particles) and briskly stir till the right consistency of paste is obtained. It is essential that the water be at *boiling heat* when stirring into the mixture of flour and sugar. Add 4 or 5 drops of carbolic acid to keep the paste from becoming sour. When this has been well stirred in and the mass cool, it is fit for use. Apply with a fairly fine pig's-bristle brush for evenness.

Phacelia for Honey and Forage.

This plant which has had such a boom in Germany, although little has been said about it in California (it was introduced into Germany from California), has had a good deal said in its favor as a forage plant. Of course it is natural that a good honey-plant should be viewed optimistically by bee-keepers, and to say the least its value as a forage plant would not be underrated ; so it is not strange that some of the German bee-keepers should enter a protest against praising phacelia too highly as a forage plant.

Pastor Eck, in Praktischer Wegweiser, speaks highly of phacelia as a honey-plant, and adds :

> "But that phacelia is a good forage plant, and as such to be recommended to farmers for cultivation, we bee-keepers dare not assert, for it would be foolish to awaken in our neighbors hopes that would not be realized. Such a thing would soon bring its bitter revenge."

The testimony of a well-known Californian, W. A. Pryal, hardly agrees with this. He says in Gleanings in Bee-Culture :

> "Some of the varieties are of rather delicate growth ; others are robust. The former are relished by cattle ; and where it grows in quantities it is a valuable pasturage. I have found bees working on all the varieties I have noticed, but I do not think it can be counted on for any large honey-flow."

Probably no one in this country has done more than Dr. Miller to call attention to phacelia, but a Stray Straw in Gleanings says :

> "Phacelia doesn't come up to expectations. I have a patch about 10 feet square that I've been watching closely. The bees don't work on it as thickly as I expected, from having seen them on a few plants years ago. Possibly that was in a time of dearth. A patch of buckwheat would have more bees on it. Horses will eat it, but do not seem to hanker for it ; neither does a bed of it look as pretty as I expected—don't believe it's worth booming in this locality."

Del Miele e Suoi Usi.

That's the name of a pamphlet received, no doubt a very interesting one, upon honey and its uses, but unfortunately Italian is not the common medium of communication in this office. The work contains 24 neatly printed pages, written and published by Carlo Perucci, Treia (Marche), Italy.

Miscellaneous News Items

Michael Ambrozic, of Austria, one of the most widely known bee-keepers of Europe, died recently. He was an extensive advertiser and an up-to-date apiarist.

* * *

Mondeng Mfg. Co., have already issued their 1904–05 catalog of a full line of bee-keepers' supplies. It has 64 pages and cover. They are out for business, and expect to get their share of the patronage of bee-keepers. A copy of their catalog can be had by addressing Mondeng Mfg. Co., 147–149 Cedar Lake Road, Minneapolis, Minn.

* * *

A Serious Experience with Bee-Stings.—The Alkaloidal Clinic for September—a leading medical journal published in Chicago, contains the following account of the very serious effects of bee-stings on one of its Missouri readers, who evidently is also a bee-keeper :

BEE-STINGS.

I have had some personal experience with bee-stings recently, which I wish to report and if possible get some help.

June 17, in helping a neighbor hive a swarm of bees, several of them stung me. In a few minutes I became very sick. There was an intense tingling over the entire body, the skin became flushed, eyes suffused, the heart's action became tumultuous, and there was a sense of oppression. I soon felt nauseated, but at this time did not vomit. In a few minutes purging commenced and was quite active and imperative. This condition continued for an hour or more, then gradually subsided. But for two or three hours if I would so much as move a foot a wave of tingling would pass over my entire body.

Yesterday, July 4, in working with my bees, one stung me on the forearm. Within 3 minutes I became sick, only more intensely so than on June 17. At this time I vomited and purged within 10 minutes of being stung. All the former symptoms were present. Both times I was stung soon after the noon-day meal. I have been stung often before, with no ill-results ; having many times remarked that bee-stings did not hurt me as much as mosquito bites —and this was an absolute fact. The sting yesterday caused considerable swelling which now, more than 24 hours after, still continues unabated.

The books give very little treatment, except alkalies locally. One book recommends strychnine arsenate and quinine arsenate. Also hyoscyamine for spasm. In my case there was decidedly the reverse of spasm. With me it acted as a vasomotor paralyzer. The condition simulated that produced by an overdose of hyoscyamus, except the secretions of saliva, etc., were not diminished.

Can the editor or some brother tell me of some means I can use which will prevent this unpleasant effect every time I am stung? No doubt the best plan would be to let the other fellow look after the bees. But I really enjoy the care of bees, but of course can not continue handling them if I must suffer thus and at the same time lose so much time from my business.

There was also a peculiar roughness of the skin which on my arms had the appearance of *cutis anserina*, but over my body the elevations were as large as peas, or larger.

W. W. SHAFER.

The Alkaloidal Clinic's editor replies thus to Mr. Shafer:

Our personal acquaintance with bees has been limited and not at all satisfactory. *Apis mellifera* seems to look upon us as a suspicious character, and if we go within speaking distance of the hive we *get it*—and though the effects are not quite as marked as you describe, they are decidedly uncomfortable—enough so, at any rate, to make us return the antipathy. Perhaps some apiculturist will give you the information you seek. The injection of a 2-percent solution of potassium permanganate is unquestionably the best remedy for the sting—after you have got it. The best prophylactic we know is—keep away from the bee. But this is really a serious matter and we call upon members of the Clinic family to come to the brother's assistance—our's also.

And we also pass on the invitation to any M.D.'s among our readers, to come to the aid of both the Clinic's editor and his bee-keeping correspondent, if possible.

* * *

Rheumatism Cured by Bee-Stings.—Mr. W. A. Ballinger, of San Juan Co., New Mex., sends a clipping from the Denver Post about bee-stings as a cure for rheumatism. The only danger may be that much of it is mainly a newspaper story, something like the manufactured-comb-honey canards that are forever going the rounds of the press. But we give the item herewith, as it is well known that bee-stings are used in the preparation of certain medical remedies :

PHILADELPHIA, June 20.—After long experiments by bacteriologists, a firm of wholesale chemists has sent agents to Texas to obtain all the bee-stings, from which serum will be made for the cure of rheumatism.

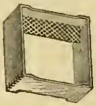
A farmer afflicted with rheumatism was set upon by a swarm of bees and frightfully stung. His face, neck and limbs were covered with red spots and swollen for days. When the swelling subsided, to the farmer's delight the rheumatism had disappeared.

Supplemented by similar cases, this tale came to a man who was interested in bacteriological experiments. The loss of its stinger, if carefully removed, will not destroy the bee's honey-making ability.

A special laboratory is being constructed near Philadelphia for the transformation of the bee-sting into a serum. The stings will be transported thither from the bee-farms in air-tight glass-tubes in specially constructed cases, so designed that the temperature surrounding the tubes may be kept the same as that of the bee's body.

In a finished state the product will be sold in small vaccine points of the same form as antitoxin and the smallpox virus.

Contributed Special Articles



Sugar and Honey—Consideration and Comparison.

BY ADRIAN GETAZ.

I am not going into a scientific definition of the words sugar and honey. Every reader of this paper knows what they are. From the scientist's standpoint there are several kinds of sugars. The most important of all is called sucrose, sometimes saccharose or simply cane-sugar. In this paper I shall use the word sucrose exclusively, and reserve the words sugar or cane-sugar as they are commonly understood in every-day life.

SUCROSE.

The ordinary granulated sugar is nothing but sucrose practically pure. The impurities that it may contain do not amount to one one-hundredth of its weight. That means that sucrose and granulated sugar are really the same. It does not make any difference whether it comes from the cane or from beets, notwithstanding what some uninformed writers have said.

From a scientific standpoint sucrose is a chemical compound of carbon and water, or at least of carbon and the elements that constitute water. Whether these elements are there in the shape of water, or independent, we cannot say positively; but there are strong indications towards the first supposition. So we may take it for granted that sucrose is composed of carbon and water chemically united.

CHEMICAL COMBINATIONS.

I suppose that every reader of the above understands what I mean. But for those who perhaps do not, I will give some explanations.

Carbon is what we might term pure coal, or rather charcoal. Lampblack is almost pure carbon. The diamonds when pure white are absolutely pure carbon. There is at first sight a vast difference between lampblack and diamonds. However, the diamond is carbon crystallized; that is, the particles of carbon are close together and placed in regular order.

There is a vast difference between a mixture and a chemical compound. Pour carbon (or lampblack) into water, and stir. This is a mixture. But combine them chemically and they will form some kind of sugar or similar substance.

A striking example of the difference can be seen when working plaster of Paris. Mixing the plaster with plenty of water will give a thin paste or batter almost as liquid as water. This is a mixture. After awhile, this mixture becomes almost suddenly very hard; in other words, the plaster has "set." That is, the water has combined chemically with the plaster and become solid.

INVERTED SUGARS.

Let us put some granulated sugar (sucrose) in water. It will melt, or rather, dissolve. In fact, the word dissolve should be used exclusively for such cases, and the word melt reserved for the action of the heat turning a substance

DIRECTOR C. A. HATCH.

DIRECTOR DR. C. C. MILLER.

DIRECTOR J. M. HAMBAUGH.

into the liquid state—for instance, melting wax or melting lead.

But the sugar dissolved in water is not combined, but mixed with the water.

Let us now boil the mixture. After awhile the mixture thickens considerably, and if then left to cool, assumes the appearance and consistency of a syrup. The sucrose has become inverted. That is, it has chemically combined with an additional proportion of water and thus formed another kind of sugar, or rather a mixture of two kinds, one of which is called dextrose and the other levulose.

The change takes place very slowly if no acid is present. But an addition of any kind of acid will accelerate it considerably. The stronger the acid, and the larger quantity there is, the less time or heat is required.

CANE-SUGAR.

The first step in the making of cane-sugar is to cut the cane and press it, so as to extract the juice as completely as possible.

The juice is then boiled rapidly in a pan with a certain quantity of lime. The lime has two effects. The first is to separate the purely vegetable matters contained in the juice so that a part of them settles at the bottom, and another part comes up as a scum and can be skimmed off. The other effect is that the lime combines chemically with the different acids that are in the juice, and forms compounds that do not invert the sucrose. If the acids were left intact, every bit of sucrose would be inverted during the subsequent boiling.

The boiling is done as rapidly as possible in a succession of shallow pans. When the juice is sufficiently reduced it is left to cool. The sucrose with more or less impurities, crystallizes more or less perfectly, and the remaining juice, chiefly composed of inverted sugar, constitutes the molasses of the commerce.

Before the appearance of corn syrups, molasses was bringing a good price, but now its production is almost a loss. In order to reduce it on many of the modern plantations, the boiling is done in a vacuum pan.

REFINING.

The brown sugar is sold to the refiners. It is dissolved in plenty of water, and then goes through a series of operations during which all, or practically all, the foreign substances are eliminated. The water must now be evaporated. To boil the dissolution in an open vessel would result in the inversion of a large portion of the sucrose. To avoid this the evaporation is done in a vacuum pan. The dissolved sugar is placed in an air-tight vessel (the vacuum pan) and the air and vapor inside are pumped out as fast as the water evaporates. The effect of the pumping is to cause the water to evaporate rapidly, though none, or but very little heat is applied. The sucrose crystallizes as the water is withdrawn, and after one or two more operations is practically pure, and constitutes the granulated sugar of commerce. Light brown sugars are obtained in a similar but less complete treatment.

HONEY.

The nectar that the bees find in the blossoms is not honey, at least not yet. It is composed of water in which are dissolved about one-fifth of its weight of sucrose, some inverted sugars in a very small porportion, a very minute quantity of essential oils, and some very little quantities of the different substances that go to form the different plants. The essential oils are very pungent and strong in odor and taste, and it is to them that the peculiar tastes of the different honeys are due.

The bees gather the nectar and bring it home. There they put it in the cells, take it out and put it into their stomachs, put it back, and repeat the operations until the honey is sufficiently ripened. It is then left in the cells until a more complete evaporation has taken place, and then sealed.

During these operations the formic acid secreted by the stomachs of the bees has been added. The heat of the hive and the bees, and the addition of the formic acid, evaporate a large portion of the water contained in the nectar and cause another portion to combine with the sucrose, invert it and transform it into dextrose and levulose, about half and half. Usually, a small portion, more or less, of the sucrose remains unchanged.

GRANULATED HONEY.

If we put some sugar in water it will dissolve in it completely. We may add more, and it may dissolve also. But eventually a point will be reached where no more can be dissolved, and if more is added it will remain intact. That is, the water will dissolve only a certain per cent of its weight of sugar. If we try with warm and cold water we will find that the warmer the water the more sugar will be dissolved. If we try with common salt, soda, bluestone, copperas, alum, etc., in succession, we will find a great difference between them. Of some, large quantities can be dissolved; of others, very much less. Generally warm water will dissolve very much more of a substance than cold water. In some cases it is not so. Boiling water will dissolve but little more common salt than cold water.

Now if we dissolve as much of a substance as can be done in water, and then withdraw through boiling or otherwise a portion of the water, evidently a portion of the substance dissolved will return to its former state, since there is not enough water to dissolve all of it. I say its former state, but it is not strictly correct; usually the substance thus restored crystallizes, that is, if it is such that can crystallize.

Now let us turn to the honey. It is a mixture of dextrose, levulose and some sucrose dissolved in water, beside a very small percentage of other substances. As long as the temperature is sufficiently high the water may be able to keep all in dissolution. But in cold weather it may not be so. Of the three the sucrose crystallizes easily and in definite shape; the dextrose does not crystallize so easily, and when it does the crystallization is imperfect and more of a mushy nature. The levulose does not crystallize at all. So when the weather is cold enough so that the water cannot hold all the sucrose and dextrose in dissolution, they crystallize.

If we warm the honey they will dissolve again, but only to crystallize later, when exposed again to the cold. But if the heat is maintained long enough the recrystallization may not take place no matter how cold it may be. This is due to the fact that a sufficiently long heating has the effect of inverting whatever sucrose may be left, and also to increase the quantity of levulose at the expense of the dextrose. Strong acids have the same effect even without application of heat. And it is probable that the secret spoken of lately in regard to keeping honey liquid indefinitely consists merely in adding to it a small quantity of strong acid.

FEEDING.

Lately some complaints have been made that sugar syrup fed for winter has crystallized, and the quality of the sugar has been crystallized. It isn't the sugar—it is the mode of feeding. Several years ago the sugar was boiled until it became syrup, and tartaric acid was added. Under such conditions the sucrose was inverted and the resulting syrup acidified by the tartaric acid was very much like honey; in fact, it is a kind of honey. Now we merely feed sugar (that is, sucrose) dissolved in water. If the feeding is done slowly, and the weather is warm enough, the bees will do the inverting themselves. If not, they will merely store dissolved sucrose which is liable to crystallize almost at any time.

BEET-SUGAR.

Somebody, I think in England, said that beet-sugar is unhealthful for bees. That depends to what point the refining process is carried out. The fabrication of beet-sugar is more complicated than that of the cane-sugar. The beet's juice is very impure, comparatively, and contains substances more difficult to separate, some of them of a bitter and salty taste. In Europe the refining process is not always carried to its extreme perfection, and the sugar thus obtained is sold cheaper, and acknowledged to be beet-sugar. When thoroughly refined, it is like the cane-sugar—nothing but pure sucrose, or practically so. What the public does not always know is that the best beet-sugar is often sold for cane-sugar. And the innocent apiarist who said that cane-sugar is far better than beet-sugar had more than likely used two different qualities of beet-sugar.

GLUCOSE.

Glucose, cane-sugar, etc., are obtained from corn; that is, the starch contained in the grain, not from the juice of the plant, as many people imagine. The starch is extracted through some process of grinding and washing. The starches, like the sugars, are chemically composed of carbon and water, but the proportions and arrangement of the particles are different. Like sugar, the starches can be inverted, but the transformation is more difficult. Practically it is done by submitting the starch to the action of strong sulphuric acid with enough water to keep the resulting glucose dissolved. If absolutely pure, the glucose is nothing but the same levulose that exists in the honey. Often the word glucose is applied to the dextrose as well as to the levulose or any mixture of the two.

After the transformation has taken place, the acid and the glucose are both together dissolved in the water. The question comes now to separate the sulphuric acid. This is done by adding just enough lime to combine chemically with the sulphuric acid. The product of this combination is nothing more nor less than plaster of Paris. As this cannot be dissolved in water, it assumes the solid state, and can be separated by filtration.

All that looks very nice on paper. Practically it is not so. There are practical difficulties to surmount, and the result is that the glucose or syrup found in the market contain more or less sulphuric acid, lime or plaster. Furthermore, neither the lime nor the sulphuric acid used are pure, and some of their impurities cannot be separated from the mixture. The worst of these impurities is the arsenic frequently contained in the sulphuric acid. It may be explained here that the mineral from which the sulphuric acid is extracted, usually contains some arsenic.

As a matter of fact, cases of poisoning through the use of glucoses containing arsenic have occurred several times.

Knox Co., Tenn.

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Rearing Queens—Methods Considered.

BY G. M. DOOLITTLE.

I have received the following letter to the Editor, forwarded to me for reply in the American Bee Journal:

Mr. Editor:—I have a word in connection with Mr. Doolittle's article on page 550, which I consider of value. We find his plan is to put royal jelly into the cell-cups before he does the larvæ. To save this trouble I prepare a queenless nucleus of young bees, which is fed the same as the queen-right colony. All I then do is to transfer the larvæ into the cups, place them in this nucleus—which I style the royal jelly stand—leave them there about twelve hours. Then place them in the queen-right colony to be completed, thus saving and getting better work done, for the bees put in jelly fitted to the age of the larvæ. By this plan I have many times in succession had every cup accepted.

I would like to ask Mr. Doolittle how he manages to keep the cells clean during comb-building season. I have more or less trouble with the bees building comb around the cells.

Is anyone mating queens from the top story with a laying queen below? If so, how is it accomplished? I am very desirous of getting information on these points.

Uinta Co., Utah, Aug. 20. John Merkley.

Replying to Mr. Merkley, I would say that I have gone over all the ground he has, and I can only see in it more work with *no better* queens, than with the royal-jelly plan, as given in the American Bee Journal. I know *queenless* bees can be made to do almost anything by way of rearing queens from larvæ given, but any person can put royal jelly into the cell-cups, and then "float" the larvæ off the transferring "needle," in less time than he can put the same number of larvæ into the same cups without the jelly. At least that is the testimony of scores who have tried both ways. This being the case, all the manipulation with queenless colonies is a waste of time and a vexation of spirit. Very many times I have every prepared cell-cup accepted, having in one instance had 99 perfect queens emerge out of 100 prepared cups, the same being given at five different times, 20 at a time. I gave the average before.

All that is needed to keep the cells free from comb is to extract the honey when the bees are crowded for storing-room; or take out two or three full frames of honey and put empty frames in their places, in which they can build comb.

Two sheets of wire-cloth, half an inch apart, between the two stories, will secure the safe mating of queens from an upper story, with a laying queen in the lower. Sometimes the same arranging of perforated-zinc sheets will accomplish the same results; but at times the bees will persecute and kill the virgin queens above, where the bees from below, with the laying queen, have access to the apartments where the virgins are.

Onondaga Co., N. Y.

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we have used it ourselves.

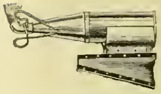
Prices, prepaid—Sample copy free; 10 for 20 cts.; 25 for 40 cts.; 50 for 70 cts.; 100 for $1.25; 250 for $2.25; 500 for $4.00; 1000 for $7.50. Your business card printed free at the bottom of the front page, on all orders for 100 or more copies. Send all orders to the Bee Journal office

DIRECTOR W. F. MARKS.

DIRECTOR G. M. DOOLITTLE.

DIRECTOR P. H. ELWOOD.

Proceedings of Conventions



Report of the Fourth Annual Meeting of the Texas State Bee-Keepers' Association, Held at College Station, Tex., July 5 to 8, 1904.

REPORTED BY LOUIS H. SCHOLL.

(Continued from page 646.)

SUCCESSFUL MANAGEMENT OF OUT-APIARIES.

The most important factor in this line of work, I believe, is to be done in cleaning of frames, bottom-boards and hives in general. See that all colonies have queens, and how breeding is progressing. In cleaning hives, etc., it has always been easier to have an extra hive-body and bottom-board. The first thing is to set the colony off to one side and put the empty hive down, then proceed to clean frames and place in the empty hive down, then proceed to clean frames and place in the empty hive-body. In this method I find we kill less bees, and work faster.

The next time around we spread brood. That is, those colonies that need it, and it has been my experience that nearly all colonies with brood in four frames need it, if there are enough bees to cluster on 6 frames. I generally give them one comb in the middle, then place pollen frames on the outside of the brood-nest, and on each visit to the yard thereafter I spread likewise. After the first spreading I always place the comb containing eggs and larvæ on the outside of the sealed frames of brood, so in case of any chilling it will be better for the colony to lose the larvæ than the brood, as we are working for young bees to help rear more brood, and as a rule queens lay in combs between hatching brood better than they do between combs containing larvæ and eggs.

As I have described brood spreading I will describe equalizing. It is my opinion that it is the best policy to build up strong colonies by help from the weaker ones. Of course, if you have plenty of time to stimulate brood-rearing, and if your strong colonies have 8 to 10 frames of brood, then take a frame of hatching brood from the strong ones, placing the empty frame in the middle of the brood-nest of the strong colony.

We will now suppose all colonies are ready for the flow. We begin supering by giving one super with a bait-comb, and if the flow is late in arriving, as in the past two seasons, and colonies commence building cells and preparing to swarm, if increase is wanted we draw two combs of hatching-brood and a queen-cell and start a nucleus, inserting in their place frames containing full sheets of foundation, thus preventing them from building drone-comb, and nine times out of ten preventing swarming.

If no increase is wanted, then cut the queen-cells, and if there are any weak colonies in the yard, do some more interchanging of brood for empty combs.

After the flow is on, super where needed. Never super a colony that has no need of it. When a super is 2-3, or nearly 2-3, finished, place a super under it, and so on through the flow.

In some cases where you draw two frames of brood and it does not check the swarming fever, then shake them on full sheets of foundation, and if the queen is very prolific, give one comb of hatching-brood and one frame of larvæ. Select larvæ, if possible, too old to start queen-cells from. This plan has never failed to quell the swarming fever, and I have never had a swarm to go out.

When taking honey one man shakes the supers and another man carries and stacks them up.

After this, super colonies as if expecting another flow.

The most essential thing in successful bee-keeping, whether out-apiaries or not, is the quality of stock—good, prolific queens. Holy Lands or three-banded Italians mated to golden drones are my preference.

And movers among assistants that have the ability to do as instructed. CARL WURTH.

F. L. Aten discussed at length his method of managing out-yards. He uses all 10-frame hives throughout. All his supers are 10-frame, deep-hive bodies. These he tiers up as high as needed and gives the queen all the room she needs. He produces mostly extracted honey, and that with plenty of room that he furnishes he has little trouble with swarming. He uses half sheets of foundation in the supers and alternates them with a honey-comb and a frame with foundation. A bee-keeper intending to run out-yards must have a good deal of experience in bee-keeping before spreading out too far.

Willie Atchley uses full-depth bodies throughout, and leaves all the supers on during the winter. During the breeding season he scatters brood through two or more bodies and thus reduces swarming.

L. Stachelhausen uses divisible brood-chamber hives and with them and the shaking of swarms he manages out-apiaries successfully. With these hives swarming can be successfully controlled whether running the out-yards for extracted or for comb or section-honey. For years his average of swarming has been only 2 per cent.

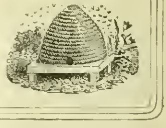
Hereupon several questions came up for discussion on the order of a question-box, and after that the several committees made their reports.

A large delegation of bee-keepers expected to attend the St. Louis meeting of the National Bee-keepers' Association, and an earnest effort will be made to secure the meeting of this Association for next year. This meeting will be held then during the time of the International Fair at San Antonio, and a good convention will be assured. It is now about time that the National should come South, and Texas wants the meeting. Every effort will be made to entertain the Northern bee-keepers when they do come, and we will be glad to show them what our country looks like.

There are many Northern bee-keepers who are interested in Texas as a honey country, and if the National meets here it will give these a chance to come and look around.

(Concluded next week.)

Our Bee-Keeping Sisters



Conducted by EMMA M. WILSON, Marengo, Ill.

Is Handling Queens a Cause of Balling?

I feel under such obligation to our good After-thinker for his original and attractive way of putting in a new light many of the good things he afterthinks, and especially for his doing it in such a delightfully good-natured way, that I hesitate to talk back; but I feel impelled to stand up for the practices of the bees—at least of the bees "in this locality," whatever may be their training in Mr. Hasty's region.

On page 616 he says: "I think Miss Wilson is wrong in assuming that Sister 'Colorado's' queen was balled to protect her. That startling smell, originating with the fingers of that 'critter' that had touched their queen, was what did the business." Now if he gives that as a possible alternative, or even as a probable alternative in that particular case, I might promptly accept the amendment. But when he talks as if bees never ball their queens for protection, and makes it appear a probable thing that every time a queen is touched by the fingers she will be balled, I respectfully—very respectfully—demur.

He says: "The nicest, cleanliest fingers are to the bee more than an onion is to a human being." Now, if Mr. Hasty detests onions as much as I, that means that every time a queen is touched by the fingers she is sure to be balled. Every queen we have is handled at least once in her lifetime by the fingers—when she is clipped—and if any harm comes from it once in a thousand times we never know it. To be sure, we don't watch to see whether the bees ball her, but if harm came to the queen from the handling, we should be able to recognize it at the next opening of the hive.

A good many times a queen is found balled by her own bees—not immediately after being handled, for at that time she is allowed to run down among the bees, and the hive is immediately closed—but she is found balled when the hive is first opened, when human touch could not have defiled her for days, or for months. In such a case I don't know for certain why she is balled, but she is certainly *not* balled because handled. If the hive is promptly closed, and the bees left in quiet, the queen will be found all right at the next visit. That looks as if the bees had been frightened at the opening of the hive, and balled her to protect her. If that isn't the correct explanation, Mr. Hasty, tell us what is; but please don't say the touch of the fingers has made the trouble when she has not been touched at all.

Stung by a Queen-Bee—Drone-Laying Queen—Swarming—Bee-Hive Chickens.

Old bee-keeper though I am, I have been having some new experiences this summer.

Swarming has been very much in order among the colonies. I aim to practice "anticipated swarming," but the bees got ahead of me on many occasions until I am about ready to say, "For ways that are dark and tricks that are vain, the swarming bee is peculiar."

The books to the contrary notwithstanding, I am quite sure I was stung by a *queen-bee*. The circumstances were as follows:

I had given a mature queen-cell which failed to hatch, and later out came a swarm that had at least four young queens. As I watched them at the hive-entrance I caught one of the queens and made a prison of my left hand. Presently I picked up another and put her with the first. Soon after I felt an unmistakable sting on the inside of the prison that could have come from none but one of the royalties. Possibly they undertook to wage war in their close quarters.

I have also for the first time had a drone-laying queen, greatly to the detriment of the colony that cherished her. She was a very fine-looking queen, too. I could not see anything wrong with her.

A short time since I had a letter from a friend in which she told me of her troubles—that the bees had done little in the supers but had all swarmed twice, some of them three times. It recalled vividly to my mind my own experience in the early years of my bee-keeping, when it could truly be said of my hives: "There is always room at the top," and my bill for sections was of the lightest, because the same ones did duty for more than one year. Bait sections? Yes, to be sure I had them, and the "bait" was *carried below!*

I have much better success now, and if I had had my friend with me the day after I received her letter, I would have given her an object lesson when I overhauled two of my hives. One was a 10-frame hive where everything was prosperous from a bee-standpoint. There were populous combs with plenty of honey, and what little drone-comb was in the hive was filled with eggs or brood instead of honey, showing preparation for swarming. The other was a hive in which I had put a splendid swarm less than two weeks previous. I hived them on 5 Langstroth frames with starters which they had built into beautiful snowy combs, and they had gone with a rush into the sections and were ready for a second case.

I feel grateful to Mr. Hutchinson for his article on the "Use and Abuse of Comb Foundation." His little book is full of meat.

I see the matter of bee-hive chickens is still on hand. I think if my success with them had been as great as I hoped for, I would have sent a report long ago, but I have 3 bee-hive chickens that were hatched on June 8th. I had 12 eggs that stood the first test all right, and I was hoping that most of them would hatch. I think some dashing rains and a defective hive-cover might account for the failure of the other chicks to get out of the shell.

Now, lest some doubting Thomas should set me down as being related to Munchausen I would better tell the *whole truth!* It seemed to me when I put the thermometer in the nest that the heat was insufficient, so I put hot water in an ordinary rubber warming bottle, and laid that over the eggs—not touching them, of course, but having several layers of

DIRECTOR W. A. SELSER.

DIRECTOR UDO TOEPPERWEIN.

paper and cloth between, so that the heat might sift down gently. Then the whole was covered with a chaff cushion to retain the heat. The bottle was refilled every night and morning, and the water was never cold at these times.

Custer Co., Nebr., Aug. 31. MRS. A. L. AMOS.

Seasons, as well as bees, are freaky things. You are having much swarming this year, while a large number of our colonies have never had so much as an egg in a queen-cell this season.

Last year, however, was one of the worst for swarming, contrary to the rule that when bees are storing heavily they give less thought to swarming.

Your "possibly" might well be "probably," in that queen-stinging case, one queen trying to sting the other, and stinging you by mistake. Yet there might be one exception to the rule that a queen never demeans herself to sting anything less than royalty. Certainly an exception has been known to the rule that a queen never stings a worker.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses. By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

EXTRACTING FROM COMBS WITH BROOD.

Thanks to Mr. Dadant for the courtesy with which he treats my rather strong protest against extracting from combs with brood in them. Nevertheless, in that matter (my country before my politeness), I feel bound to hit every head I see. In the article of his, on page 566, I'm obliged to see a little corner of his head—where he says a little care at the extractor will throw out the honey and leave the larvæ. In reasonable presumption the most pronounced nastiness ever to be found in a normal bee-hive is not in the brood-cells but in the thinned-down honey, or feed-fluid, in which honey is only one ingredient, placed, to be handy, right adjacent to the brood. No amount of care on the part of the operator can avoid throwing that out to mingle with the honey. Flies out before the honey does. And with the laws we already have, the pure food commissioners may get around eventually to avenge decency and justice—bring the offenders right up standing, by condemning their honey to the swill-tub.

BEE-PAPERS OF CHRISTENDOM.

Astonishing! Plump 87 bee-papers have been caught and listed by name—besides the possibility of there being a few more loose in the woods. That Canada gets along with one and Belgium indulges in eight looks like some other things in this world—a trifle out of balance. The hind one of the eight in Belgium will hardly make its proprietor a millionaire. Still, maybe he has food and raiment from some other source; and maybe he enjoys seeing his name on the paper as editor, so *awfully* well (not editor written that nerveless way, but editor with big capitals all the way through) that he is really one of the happiest of mortals. Life is what the liver makes it. Should we forbid him to live life as he understands it? Not unless he first comes to understand some higher conception of life. Page 579.

THE FOLK-SONG ABOUT THE BEE AND ROSE.

That little folk-song about the bee that took the pot of honey without laying down any money is good enough that one wonders that it should keep hid for a generation without getting into print. Red Rose was willing to furnish nectar and take pay in music—liked it even in solo. Humans all like it in distant, gentle chorus; but when it strikes up at solo near by they think of sudden business elsewhere. Page 580.

BEE-KEEPING BY MAIL.

Bee-keeping by mail correspondence! Well, what's to hinder? Some would a great deal rather start in that way than spend a season "subbing" it in somebody's apiary—doing long hours of simple drudgery, out of which nothing can be learned but humiliation. Out a little on cost, but decided saving of comfort and independence and time. When sudden need of help pinches, a letter may be a little slow; but even with the other kind of instruction the teacher cannot be expected to stand looking on all the time; and beginner will contrive to get into, now and then, a scrape too strenuous to admit of hunting up teacher to find out what to do. Page 580.

"FACTS ABOUT HONEY AND BEES."

J. E. Johnson is not far from right when he puts health next to salvation, in value. But when he patters along the disgraceful old beaten path, and joins in the regulation outcry against sugar as an unhealthy thing, I take the opposite side with plenty of vim. Sugar and high-sugared viands get a bad name unjustly, because usually eaten after the person has already eaten too much. Both wholesome to a high degree if repletion is avoided. All the same, "Facts about honey and bees" are very suitable to be set before the outside public for perusal. Page 581.

SISTERS VS. THE BRETHREN AS BEE-KEEPERS.

So the Sisters think the average man is a genius in setting things in confusion, needlessly, and leaving them so. What shall we say to this indictment, brethren? Are we guilty, or not guilty—or unable to tell till we hear the evidence? Let's reform, first, and prove our innocence afterwards. (Say, it's the married man that's guilty. Gets confirmed and hardened in this crime by leaving everything for his wife to straighten out. Bachelor gets careful and fussy, all samee girl bachelor.) Page 584.

LATE SWARMING AND HANGING-OUT.

The fact that "Maryland's" colony swarmed abnormally late last year makes it a little more supposable that they are meditating the same thing again this year, as they hang out. Dr. Miller is right, however, in hinting that the probability of swarming decreases decidedly after bees have hung out more than the usual time. Toward autumn there are sometimes great bunches hanging from many hives, with no swarming at all. Page 587.

DIRECTOR WM. M'EVOY.

Ask Doctor Miller ??

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Keeping Mice Out of Hives in the Cellar—Uniting Two Small Colonies.

1. If I take off the bottom-boards when I put bees into the cellar for wintering how can I keep the mice out?

2. How ought I to proceed to unite two small swarms, and when ought it to be done? They are two rods apart.

3. Do you think it best to contract the hive-space for the bees before putting them in the cellar for wintering? Some of the bee-men here say, "put them in as they are."

Michigan.

Answers.—1. I don't know that you can satisfactorily. Yet you might make a frame two inches deep, covered with wire-cloth, with coarse mesh to put under the hives.

2. Remove one of the queens three or four days before uniting. Then take the queenless bees to the other hive, alternating the combs. Or, set the queenless colony over the other with a sheet of manila paper or two or three thicknesses of newspaper between them and a hole torn in the paper big enough for a single bee to get through at a time.

3. Just as well to put them in as they are.

Queenless and Laying-Worker Colony.

I have a little trouble on my hands at present. Colony No. 1 issued about July 15. I hived the swarm, moving the old hive several feet away and placing the new swarm at the old place. The old swarm, or Colony No. 2, remained very weak, in fact seemed to get weaker and weaker. Thinking it was queenless, I sent for a select tested Italian queen. Before introducing her I was going to make sure that the swarm was queenless, so I opened the hive again and this time found plenty of capped and uncapped brood, but no queen. On further examination I found nothing but drones—some even smaller than the ordinary bee. I searched for the queen, but in vain—even forced all the bees through a queen-excluder twice with no results. Is it possible that there is a laying worker in the hive? What can be done in my case? I have the Italian queen in a cage on the hive, but the bees will not come up, and therefore I think they will not accept her. Can this queen be introduced in this colony? How?

Wisconsin.

Answer.—That colony has been queenless eight weeks, and the bees are so old that at this time of year they're hardly worth saving. It is not only "possible that there is a laying worker in the hive," but pretty certain that a lot of laying workers are there. It is not likely that you can get the colony to accept the queen. It is not a question of saving the colony, but how to save the queen. Perhaps the best way is to introduce her into another colony in a normal condition, removing its queen. The next best thing is this: Take two or more frames of bees from a colony with a laying queen—better still if taken from two or more different colonies—put them in a hive with the queen in an introducing cage, set the hive close beside the colony of laying workers, and keep the entrance closed for three days. Then, every day or two, give to this nucleus a frame of comb and bees from the laying-worker colony till nearly all are given; then shake down in front the remaining bees and take away the hive that had the laying workers.

Dividing After the Honey-Flow.

1. Desiring to increase my colonies, I want to inquire if it would be wise in my case to divide the old colonies this late in the year, after the honey-flow is over. My colonies are strong, and I thought of dividing them and letting the nucleus rear queens from the comb of eggs and brood given them.

California.

Answer.—Don't. Better have one colony to go into winter strong and good, than two with neither of them fully up to the mark. Neither is it best early or late to give brood to a nucleus to rear a queen. A good, strong colony for that up to the time the queen is nearly ready to emerge.

DIRECTOR E. WHITCOMB.

DIRECTOR R. C. AIKIN.

DIRECTOR W. Z. HUTCHINSON.

Reports and Experiences

Good Reading-Matter a Great Help.

I am enjoying reading the back numbers of the American Bee Journal. I have 12 colonies of bees, and if I had had as much good reading several years ago as I am having now, I might have had 50 or 100 colonies. I use 10-frame chaff hives. ALLEN C. DICKS.

Grant Co., Ind., Sept. 19.

Season Rather Unfavorable.

My crop of honey this year will be about 3000 pounds from 88 colonies, spring count. I have increased but little, as the season has been unfavorable. All of the new colonies, as well as the old from which I got increase, must be fed. I now have 96 colonies, all in good condition for winter.

SAMUEL H. HITT.

Jo Daviess Co., Ill., Sept. 15.

Many Swarms and Unfavorable Weather.

Our honey crop is not very good this year, about one half crop of honey and 3 crops of swarms. We never had as much swarming as this year. We had swarms as late as September.

The season opened fine; it was nice and warm with plenty of pollen to build from, but when the harvest came cold rains with cold nights spoiled the clover harvest, and the fall is pretty much the same. Our crop will probably be 50 pounds to the colony, spring count. SAMUEL C. MAJORS.

Nemaha Co., Nebr., Sept. 16.

Drones and Queens Feeding Themselves.

I notice on page 611 a letter from a Dupage Co. bee-keeper saying drones have been seen feeding themselves. I have observed the same thing many times. I've observed something more wonderful than that—if that can be considered wonderful—and that is one queen feeding another. Desiring to requeen some colonies, two queens that had been removed from the hives were put into the same cage; they clinched for apparently a life-and-death struggle, but soon released their grasp, and one of them commenced eating some honey that had been put on the screen cloth; then went to the other queen and went through all the motions of feeding her, and there was no more fighting between them; but another queen being put into the cage, she killed them both sooner than it takes to tell it. WM. M. WHITNEY.

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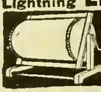

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26—36A4t

"Combed" and "Extracted"

Many Species of Bees.

Some people think that there are only two or three kinds of bees—the honey-bee, the bumble-bee, and possibly one kind of smaller wild bee. So far is this from being true that no less than 1,878 different species of wild bees have been described from North America, that is, including all of the country north of Panama up to the present day.

When we come to study the habits and structure of all these bees, it is possible to understand why they are so numerous in kinds. The pollen of flowers has to be carried principally by insects; that of one flower to other flowers of the same sort, in order to bring about the fertilization and production of seed.

Of all the insect carriers the bees are the most important. They visit the flowers for nectar and pollen, to store up in nests for their young, and when so doing they carry the dust-like pollen from flower to flower, leaving a little of that previously gathered each time they alight on a blossom. Now suppose that all bees visited indiscriminately every sort of flower, it would continually happen that the pollen of one species of plant would be left on the flower of quite a different species, where it would be altogether useless. It is desirable, therefore, that each kind of bee should visit one particular kind of plant, or at any rate should prefer certain kinds. This we find to be more or less the case, and there are many bees that never visit more than one sort of flower.

The number of different kinds of flowers are very great, and consequently it is not surprising to find that there are many sorts of bees.

Described North American bees are so numerous, it is practically certain that we do not know half of those existing. An apiarist writing on this subject, says:

"Indeed, it is not impossible that the North American continent, with the West Indies, possesses as many as 5,000 species. Thus the opportunity for the student of these insects is very great. He is absolutely certain to find in almost any part of the country species wholly new to science during his first season's collecting. In Colorado I am sure that almost any spring and summer day devoted to the search would yield new kinds. In New Mexico, up to date, 508 species have been found, and of these I have been able to describe 315 as entirely new."—Rural Californian.

Feeding Back Extracted Honey.

There is a sort of fascination about feeding back extracted honey to have it turned into comb honey. I doubt if there have been very many pounds of comb honey profitably produced "right from the stump," as Mr. Heddon used to say, by the feeding of extracted honey, but with hot weather, black bees, or those with a dash of black blood in their make-up, unfinished sections may be completed at a profit if the work is rightly managed. Feeding back is distinctly a separate branch of apiculture, as much so as commercial queen-rearing. There are many things about it that can be learned only by experience, but much can be learned by reading the experience of others. Some

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Daughters of Select Imported Italian, Select Long-Tongue (Moore's), and Select Golden, bred 3¼ miles apart, and mated to Select Drones. No impure bees within 3 miles, and but few within 5 miles. No disease; 31 years' experience. All mismated queens replaced free. Safe arrival guaranteed.

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Prices: Untested Queens, 75c each; six, $4.00; dozen, $7.50. Select Untested. $1.00 each; six, $5.00; dozen, $9.00. Safe arrival and satisfaction guaranteed. Descriptive circular free.

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very good hints along this line were given last fall in Gleanings by Mr. M. W. Shepard, of Florida. Among other things Mr. Shepard says:

"The question of feeding back extracted honey for the production of comb honey does not appear to settle any more than several other questions of more or less importance to the bee-keeping fraternity do. Opinions and theories differ in regard to the matter, and many of the shining lights of beedom say it can't be done. After an experience covering several seasons, and having had my efforts crowned with success, it may not be out of place for me to say it *can* be done, and done easily, and at a good profit, and especially feeding back to finish unfinished sections. We usually have several thousand such sections at the end of the main honey-flow, and in this climate it is well-nigh impossible to keep combs of any kind off the hives on account of the worms; so it is policy as well as profit that led us to try the feeding-back plan.

"We first assort the unfinished sections, get the supers ready, and then begin by filling the supers, putting the fullest ones in the corners and outside rows; but be sure to uncap all sealed cells. If *you* don't the bees won't, but will build new comb on top of the sealed cells, making what we call 'double-deck combs.' After you fill the supers, put not less than two on any good, strong colony whose brood-chamber is well filled with sealed brood and honey.

For feeders we use a box made of thin lumber, and which will hold a gallon or a little more. Set this box *on top* of the supers, fill it with thick honey, throw a handful of coarse excelsior on top of the honey; then cover the whole up bee-tight.

"You will find that the bees will store about all of the first feederful below, not making much of a show in the sections; but be sure to keep honey in the feeders day and night until the sections are nearly as full as they should be; then taper off rapidly with the feed, and the bees will seal the combs, and you will find them as smooth and perfect as if built under normal conditions. Take these supers off and replace with empty ones, and you will get them filled; but I would advise not to use the same colony for more than two lots, for on the third lot they seem to think they have done enough, and will not take the honey.

Now, this is all about finishing unfinished sections, but the same plan holds good if you use sections filled with foundation instead of partly finished sections. I do not claim that the foregoing is a universal plan, that will work everywhere and under all conditions, whether the conditions are known or not, but I will say that it works with us on a large scale, and we are satisfied.

"Now, does it pay to feed for the purpose of filling out unfinished sections? Yes, it pays *us* to do so. Will it pay to feed back for the purpose of producing comb honey from full sheets of foundation in the sections? Yes, if extracted honey is not worth more than 5 cents per pound, and comb honey is not worth less than 12 cents. We wish to say, first, know what you are going to try to do, then go ahead. If you don't want a puttering job, don't try feeding back, and *don't* try to be a lightning operator at the job, or possibly the lightning may strike you."

The point that Mr. Shepard mentions

Bee-Keepers Don't forget that we are the largest jobbers in the United States of *Root's Bee-Supplies, Johnson Incubators and Brooders, Humphrey's and Mann's Bone Cutters, Poultry Supplies of all kinds, Seeds and Implements.* Remember, you get these goods at Factory Prices, and save half the freight. Let us book your order for Golden Italian, Red Clover and Carniolan *Queens*; listed in our Catalog. Send for Free Illustrated Catalog.

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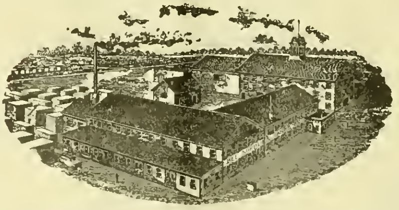

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about uncapping any sealed honey, needs, I think a little more explanation. If the combs are so arranged or placed that the spaces between them vary only slightly from a "bee-space," there is no need of uncapping the sealed cells, but if the spaces are much wider than a "bee-space," the bees, especially if crowded for room, and fed abundantly, will build comb right on top of the capped surface, giving the honey a decidedly patched and blotched appearance. —Bee-Keepers' Review.

CONVENTION NOTICE.

Wisconsin.—The convention of the N. E. Wisconsin Bee-Keepers' Association, to be held in the Opera House at Mishicot, Oct. 25, 1904, will be called to order at 10 a.m. Election of officers and other important business will be transacted in addition to the program recently published in this journal. DR. J. B. RICK, Sec.
Mishicott, Wis.

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Honey and Beeswax

CHICAGO, Sept. 24.—The market is now showing more activity. Some small lots of fancy white clover have been sold at 14c per pound, with No. 1 ranging at 12@13c; very little call for other grades. Extracted, white, brings 6@7c; amber, 5@6c, according to quality, flavor and style of package. Beeswax, 28@30c.
R. A. BURNETT & Co.

KANSAS CITY, Sept. 22.—Market on comb honey is quite active at $2.75 per case for fancy white stock. Extracted rather slow at 6½@7c. We look for the demand on extracted to pick up considerably with cooler weather. Beeswax in good demand at 30c per pound.
C. C. CLEMONS & Co

BOSTON, Sept. 22.—Comb honey continues to come in slowly, while the demand is increasing. Fancy white will bring from 16@17c; No. 1, 15@16c, and No. 2, 14c. The old honey has been practically cleaned up, there being one lot of any quantity left. We look to see our present market maintained right through the season. BLAKE, SCOTT & LEE.

NEW YORK, Sept. 8.—Arrivals of new crop comb honey are very light as yet, none to speak of, nor does there seem to be much demand as yet and prices are unsettled. We think, however, that when arrivals begin to be more plentiful, within the next 10 days or 2 weeks, there will be a demand for fancy white at 15c; No. 1, at 14c, and No. 2 at 12@13c.

Extracted honey is selling fairly well at 6@6½c for white, and 5½c for light amber and amber, and dark at 5c. Southern average quality in barrels, at 52@58c per gallon.

Beeswax dull and declining; choice grades selling at 28@29c. HILDRETH & SEGELKEN.

CINCINNATI, Sept. 15.—There is an improvement in the honey market, so far as extracted honey is concerned. The demand has increased considerably, but the supply is limited, owing to the fact that bee-keepers in general are mistakably holding their crop for better prices. We quote amber extracted in barrels at 5½@6c; white clover in barrels and cans at 7@8½c, according to quality. The comb honey situation is badly demoralized, being aught but encouraging. Quote fancy white clover comb honey at 14@15c. Beeswax, 26@28c.
THE FRED W. MUTH Co.

ALBANY, N. Y., Sept. 19.—Honey receipts are increasing, and although demand is good prices are easing up some, 15c being as high as we can sell any round lots. We quote: Fancy, 15@16c; A No. 1, 15c; No. 1, 14c; mixed, 12@13c; buckwheat, 13@13½c. We advise shipping in handle carriers by freight only; comes safely that way. Extracted, white, 7c; mixed, 6½@7c; buckwheat, 6½c. Beeswax, 28@30c.
H. R. WRIGHT.

CINCINNATI, O., Sept. 21.—Comb honey is now coming in more freely, and prices if anything have a little moderated. The sales made and prices obtained were for No. 1 fancy water-white comb, 13½@15½c; No. 2, 12½@14c. Extracted is sold as follows: White clover, 6½@8c; amber in barrels, 5¼@5½c; in cans, 6@6½c. Beeswax, 27c. C. H. W. WEBER.

PHILADELPHIA, Sept. 7.—Very little comb honey has arrived in the market as yet, but extracted honey has come in quite freely for the last two months, both from the South and West. There seems to be quite a crop of extracted honey throughout the country. Comb honey has not all been graded up yet, and we can hardly tell at this early date definitely about the price. We quote: Fancy comb, 15@16 cents; No. 1, 14@15c; amber, 10@12c; extracted, white, 7½@8c; amber, 6½@7c; dark, 6c. Beeswax, 27c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

SAN FRANCISCO, Sept. 7.—White comb, 1-lb. sections, 12½@13c; amber, 9@11c. Extracted, white, 6@6½ cents; light amber, 5@6c; amber, 4@4½c; dark amber, 3¼@3¾c. Beeswax, good to choice, light, 29@30c; dark, 27@28c.

For choice to select water-white the market is unfavorable to the buying interest, stocks of this description being exceedingly light. Common grades are rather plentiful, and are not meeting with any very active demand, although as a rule they are being steadily held.

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Mail sample and state price expected delivered Cincinnati.
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Golden Italians, Red Clovers, Carniolans,
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American Bee Journal

44th Year. CHICAGO, ILL., OCT. 6, 1904. No. 40.

WEEKLY

REV. L. L. LANGSTROTH.
(See page 677.)

OUR new edition of the A B C of Bee Culture is progressing finely. We expect to have the first copies ready in the coming December. Already we have orders booked for a large number. If you want a copy promptly you had better let us have your order now. Old price: $1.00, postage 20c extra.

THE Root Correspondence School is going to be a success. The readers of The American Bee Journal will remember that we make a special offer to them of the course for $10.00 to a limited number. Ask for our prospectus and particulars.

THE two little books: " Modern Queen-Rearing " and "How to Produce Extracted Honey" are selling fast. They are great value for little money. Fifteen cents each or both for twenty-five cents, postpaid.

IN October the discount on our bee supplies is 6 per cent. Every month you wait it will be less. It's a saving to anticipate your wants. It pays to be ready.

THE A. I. ROOT COMPANY,

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ESTABLISHT IN 1861
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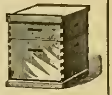
THE OLDEST BEE-PAPER IN AMERICA

Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

GEORGE W. YORK, Editor. CHICAGO, ILL., OCT. 6, 1904. Vol. XLIV—No. 40.

Editorial Notes and Comments



The National Convention at St. Louis.

The 35th annual convention of the National Bee-Keepers' Association was called to order by Pres. J. U. Harris, of Colorado, at 10 a.m., in the Christian Endeavor Hotel in St. Louis, Mo., Tuesday, Sept. 27. There were about 100 present at the first session, but more members came in later. Mr. F. E. Brown, of California, was elected secretary *pro tem*, as Mr. Brodbeck, the secretary, was not strong enough in health to be present, which was greatly regretted by all.

We will have more to say next week, as this number of the Journal goes to press too early to say it at this time.

Get Surplus Honey Off in Time.

No calendar time can be given for clearing all surplus comb off the hives. The season closes weeks earlier in some localities than in others. In any case the beginner must be on guard against the mistake of leaving supers on when bees no longer gather more than serves their daily needs. The bees make quite a show of working after the harvest is over, and the temptation is to think that they will yet store quite a little, when the fact is that they are gathering no more than they consume for their daily needs. Even before they get so low as that, surplus receptacles should be all off. For, at the close of the season, the queen is depositing few or no eggs, and yet there is considerable sealed brood in the hive. As fast as this emerges the empty cells must be filled by the bees; so they have quite a bit of room in which to store in the brood-chamber.

A section of honey that is entirely filled can be sold even if some of the cells are not sealed; but if left on the hive till the flow ceases entirely, those unsealed cells will be emptied and the honey carried down into the brood-chamber, and a section with emptied cells is a different thing from one with cells filled and unsealed.

Another thing that will happen, in many places, to a super of sections left on too late, is that the bees will smear propolis over them, not merely over the wood, but over the cappings. What is still worse is to leave on the hive sections upon which the bees have not worked at all. The foundation will be glazed with propolis, and this may be so bad that the bees are loth to accept them at all the following season.

It will not hurt the bees to be a little crowded late in the season; so be sure not to leave supers of sections on the hives too long. In case of extracted honey there is not the same trouble.

Why Do Bees Stand More Cold Outdoors?

To the question, "Why will bees winter successfully out-of-doors with the thermometer at zero, and in the cellar it must not reach the freezing point?" the editor of Gleanings in Bee-Culture replies:

> Why bees can stand zero temperature outdoors and not a freezing temperature in a cellar is a query that has often arisen in my own mind, and I think we can account for it almost entirely on the ground of ventilation. Where air is poor, the temperature must not go below 40. When pure and fresh it may go much below, or even down to zero.

No doubt bees will endure a lower temperature in pure than in foul air; so will a man. But is not the answer to the question to be found rather in the difference in the length of confinement? If a colony in a cellar has the average cellar air, and is allowed a flight every five or six weeks, would it suffer greatly to have the temperature down below the freezing point? If a colony outdoors were confined to the hive for four or five months, would the purity of the outdoor air guarantee it a continuance of life?

Wholesale Sampling of Honey.

For a number of months, some two or three years ago, we kept a lady "demonstrator" of "York's Honey" in the largest retail grocery in Chicago. It was for the purpose of creating a larger demand for that brand of extracted honey.

A glass dish holding perhaps a quart of the sweet liquid was kept on the counter in front of the demonstrator. Then, with a teaspoon, she dipped up a small quantity of the honey and put it on a thin cracker about an inch and a half in diameter. The cracker, with the honey on it, was then handed to the waiting visitor, who took it and put it into her (or his) mouth all at once. Thus, there was no honey dropping around to stick up everything upon which it might fall. And one spoon was all that was necessary.

This method of furnishing samples of honey to visitors was a success. In a great many instances it resulted in an immediate sale from the stock kept on hand in glass jars.

While dipping the honey and handing it to the prospective customer, the demonstrator talked about the purity of the honey, and also answered any questions that might be asked. It is one of the best forms of advertising pure honey, although rather expensive. Still, when the number of future sales of honey are considered, as a result of such sampling, it is perhaps as cheap advertising as can be done. During the time our demonstrator was in that particular store, her retail sales amounted to an average of about $40 a week.

About Bee-Keepers' Planning.

Good plans are of great importance. When a new piece of work is to be done, which, without planning, would take a day's time, it may be economy sometimes to spend half a day in planning, for, by that half-day's planning, the whole of the work can be done inside the remaining half day. The Bee-Keepers' Review, in speaking of this, says:

"If a man would just take *one day* 'off' and spend it in studying his business, going over all of its phases carefully, he might find it the most profitable day's time he ever spent."

That is well said, and true. Hardly so true, however, are the two sentences immediately preceding, which read:

"Most of us do too little thinking and planning. We are so busy working that we have no time for study."

There are, no doubt, bee-keepers who do too little thinking and planning, but hardly "most of us". One of the great attractions of bee-keeping is the constant arising of new problems and the enjoyment of studying them out. Compare bee-keeping with other occupations in general, and your average bee-keeper will take a pretty high rank as a thinker and planner. Just because of this our bee-papers are filled with new ideas from year to year. And just because he is a thinker and a planner, each beginner in bee-keeping gets up something new—perhaps a hive—even if he does find out later that it has already seen the light, or is to be cast aside as worthless. Oh, yes, "most of us" do a lot of thinking and planning.

Newspaper Enterprise—and Surprise.

The enterprise of the metropolitan dailies in bringing to light the unusual is likely to be amusing when bees are in question. A bee-keeper in Pennsylvania took from four colonies of bees an average of 125 pounds per colony, extracted honey. This information appears in a Chicago daily with the heading, "Bees Make Record", and the further heading, "Quarter of a Ton of Honey is Taken from Four Colonies"; and yet again, "Special Dispatch to the Inter-Ocean"! The newspaper man who fitted up that item might open his eyes if he should read of some of the record takes.

Opinions of Some Experts

Closed-End Frames vs. Other Styles in Spring.

15.—*Do bees breed up better in spring with closed-end frames, or is there no difference?*

G. M. DOOLITTLE (N. Y.)—No difference.

DR. J. P. H. BROWN (Ga.)—I find no difference.

S. T. PETTIT (Ont.)—Never used closed-end frames.

JAS. A. STONE (Ill.)—I have never noticed any difference.

J. M. HAMBAUGH (Calif.)—I don't know. Never used them.

MRS. J. M. NULL (Mo.)—No experience with closed-end frames.

WM. ROHRIG (Ariz.)—In this locality I think there is no difference.

L. STACHELHAUSEN (Tex.)—There is no difference in this locality.

C. DAVENPORT (Minn.)—I have never been able to notice any difference.

O. O. POPPLETON (Fla.)—Have no experience with closed-end frames.

JAMES A. GREEN (Colo.)—Yes. I think there is a difference in favor of closed-ends.

P. H. ELWOOD (N. Y.)—I think there is quite a difference in favor of the closed-ends.

N. E. FRANCE (Wis.)—Abundance of honey is of most importance; second, young queens.

C. H. DIBBERN (Ill.)—I think there is little difference as to frames; all depends upon the queen.

E. D. TOWNSEND (Mich.)—I have had no experience worth mentioning with closed-end frames.

REV. M. MAHIN (Ind.)—I have so little experience with closed-end frames that I can not express an opinion.

ADRIAN GETAZ (Tenn.)—I have never used closed-end frames. I don't think there would be any difference.

R. L. TAYLOR (Mich.)—Yes, somewhat, necessarily, as the closed-end frames are some protection against the cold.

C. P. DADANT (Ill.)—We tried closed-end frames, but soon discarded them; so I am not in a position to answer knowingly.

G. W. DEMAREE (Ky.)—Closed-end frames have never shown any good qualities in any respect in my apiary. I still have a few shallow extracting supers in use that have closed end-bars, and they are a worry to me.

DR. C. C. MILLER (Ill.)—I don't know; I think they ought to breed up better with closed-end frames, because warmer.

E. WHITCOMB (Nebr.)—I never could see any difference. Certain causes seem to bring about the same effect in a well-stocked bee-hive.

E. S. LOVESY (Utah)—I know of no difference; a strong colony of bees with plenty of stores will build up quick in the spring. At least this is my experience.

PROF. A. J. COOK (Calif.)—I believe they give a slight advantage, but not enough to make one sleepless of nights who has them not.

EUGENE SECOR (Iowa)—I don't know. Never used closed-ends enough to make my opinion valuable, but if allowed to guess I'd say there wouldn't be any difference.

R. C. AIKIN (Colo.)—I am not sure of any difference, and I use both. Possibly closed-ends are better, but I think the gain one way or the other would not justify a choice of style.

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we have used it ourselves.

PRICES, prepaid—Sample copy free; 10 for 20 cts.; 25 for 40 cts.; 50 for 70 cts.; 100 for $1.25; 250 for $2.25; 500 for $4.00; 1000 for $7.50. Your business card printed free at the bottom of the front page, on all orders for 100 or more copies. Send all orders to the Bee Journal office

Sketches of Beedomites

PERSONAL RECOLLECTIONS OF REV. L. L. LANGSTROTH, THE "FATHER OF AMERICAN BEE-KEEPING."

My acquaintance with Mr. Langstroth began before the war, as he located in Oxford in the '50's. I was not interested in bee-keeping, and knew little or nothing about the man; but soon after his arrival he called on me at the farm. I found him to be one of the most interesting persons I ever met—a splendid talker, one who caught your attention and held your interest, not only by the wonderful number of facts he presented, but more by the enthusiasm he showed. It made but little difference what subject was broached, Mr. Langstroth seemed to have mastered it. But his specialty was his love of nature and the interest he took in everything connected with country life. He was one of the most companionable men I ever met, and I was at once drawn to him, and an intimacy began which lasted until his death.

I recall that, during the first call he made, an older brother was present who was a student at Miami University; and knowing that Mr. Langstroth was a preacher he supposed he knew little or nothing about farming; and so as we walked over the farm he began enlightening Mr. Langstroth by displaying his own knowledge of farm life and work. Mr. L. was a good listener as well as a good talker, and he encouraged my brother until he had delivered quite a dissertation on farm life. During the talk we found that Mr. L. seemed to possess knowledge of everything connected with the growth of plants, insects, etc., and that his knowledge was as much greater than ours as the sun is greater than a tallow candle. Later, after getting acquainted with Mr. L. my brother often referred to the time when he undertook to instruct him on points on which Mr. Langstroth knew ten times as much as he did.

I think I have never met another man whose common conversation was so instructive as Mr. Langstroth's, or who had such vast resources. Added to this was a happy and impressive way of imparting instruction, and his conversation never sounded "preachy;" but by adroit questions he would draw you into discussions and enable you to show your very best side.

Mr. Langstroth was a deeply religious man, and his piety was of the cheerful sort. I have rarely met a man who impressed me so much in the belief of the fatherhood of God and the brotherhood of man. We attended the same church, and Mr. L. usually met me at the church door at the close of the meeting for a brief conversation on weather conditions and crop notes; and whenever we had suffered from drouth, and a timely rain had fallen, he would extend his hand to me and begin with that beautiful quotation from the 65th Psalm, "Thou visitest the earth and waterest it;" and that psalm has been a favorite of mine ever since, and I always think of Mr. Langstroth when I read it; and it has been my practice for many years (when a timely rain has fallen) to read it at family worship.

Mr. Langstroth was naturally of a most happy disposition, but he had an infirmity which almost amounted to insanity. It was a disposition to melancholia; and often for six months together he would shut himself in his room, refuse to see callers, and seem utterly wretched. He told me that he spent his time playing "solitaire," and he believed that was all that kept him from insanity. He would suddenly come out from the influence of these spells as bright and happy as ever; and he said to me he believed he enjoyed more happiness than the average man; for when he was free from this infirmity he was supremely happy.

Mr. Langstroth was a most eloquent preacher, and a speaker who would hold his audience perfectly. He took an active part in the business affairs of the church; and I recall once when there had been a feeling of depression in our business meeting he made an address in which he used the following illustration to show that our church was no worse off than others, and that the churches of to-day were very much freer from jealousy and troubles which hinder their work than in the former days. His story was as follows:

An old farmer in Kentucky, who lived on a farm where they were obliged to grub the sassafras sprouts every spring from the cornfields (they called them "sassafig" in the vernacular), finally became so discouraged he determined to locate in a better country. He sent two of his sons to the then new State of Missouri, of which he had heard wonderful stories as to the fertility of the soil and healthfulness of the climate. Their first letters were optimistic, and the old man became so enthused by them that he determined to emigrate to Missouri. He could not sell his farm, but made some arrangement to have it cared for by a neighbor, loaded his effects on a wagon, and started on his long journey. According to the custom of the locality, the neighbors gathered to the number of a score or more to ride out on horseback with him as far as they could and get back that day; but as they passed the postoffice the postmaster handed him a letter. In those days of 25-cent postage the receipt of a letter was an event in the neighborhood, and he stood up in his wagon to read it aloud to his neighbors. It contained bad news. The frost had ruined the wheat crop; the corn was nearly a failure; his sons had shaken with ague until they had lost courage; and the letter closed with the following words: "And, father, sassafig grows here, too." The old man turned to his neighbors and said, "I've been fitin' sassafig all my life in old Kaintuck, and I'm not goin' to a new country to begin the battle over again." And he turned his team around and drove back home.

Mr. Langstroth was intensely patriotic, and rendered valuable service with tongue and pen, as well as sending his only son to the front. In the pulpit, on the streets, and through the press his influence was known and felt for the encouragement of the soldiers and the help of the widows and orphans. I was never more impressed by a sermon and the recitation of a poem than one Sunday morning when Mr. Langstroth was greatly depressed, and came into the pulpit and began the service by reading from the Psalm in which occurs the verse, "Thou executest righteousness and judgment for all that are oppressed." Without lifting his eyes from the Bible, or changing his tone, he broke forth in the "Battle-song of the Republic."

"Mine eyes have seen the glory
Of the coming of the Lord."

He recited the whole poem in such an impressive manner as to fix the incident indelibly in the minds of his hearers.

One Sunday morning he preached a sermon from the text, "Who can find a virtuous woman? for her price is above rubies?" He became so interested in his subject, and so enthusiastic, too, that he lost all track of time, and held his audience spellbound, until finally, on looking at his watch he found he had been preaching an hour and a half, while those of us who had listened had not realized the lapse of time.

I knew Mr. Langstroth more as a minister and a friend than as a bee-keeper; but his name will go down to posterity as the inventor of the movable-frame hive which revolutionized bee-keeping, and made the success of later days a possibility. When I was a boy, if we wanted honey we killed the bees with brimstone and removed the honey. By Mr. Langstroth's plan the honey could be removed in the best condition, and the bees saved. He was an indefatigable worker along this line, and you could see him as soon as daylight broke in the long summer days out in his apiary working, and he kept it up until late at night. He spent whole days studying and investigating the habits of bees, and probably added more to the knowledge of bee-keeping, and to making it profitable, than any other man of his time. He had no fear of bees at all, and claimed he had been inoculated with bee-poison until he was immune. His talent and valuable work were appreciated by the leading bee-keepers of the United States, and his presence at their conventions was always welcome, and they voted him some substantial rewards for his investigations. His book, "Langstroth on the Honey-Bee," was, at the time of its publication, far in advance of anything that had ever been published on the subject of bee-keeping.

Mr. Langstroth lived to a good old age, dying Sunday, Oct. 6, 1895. He was still active in mind and body, and was conducting a communion service in a church in Dayton. He began the service, and suddenly stopped and said, "I beg pardon. I shall have to sit down." He sat down in his chair, and died immediately.

I look back over my acquaintance and intimacy with Mr. Langstroth as something to be grateful for, and feel that I, although not a bee-keeper, owe him a personal debt of gratitude for the inspiration I received and for what I learned from him. WALDO F. BROWN.

[To the foregoing Mr. A. I. Root adds this paragraph.—EDITOR.] :

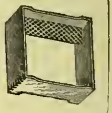
The above brings back so vividly my recollections of father Langstroth that it almost seems as if I could see and hear him talk, while reading it over. I can heartily indorse every point in the description made by friend Brown. I have told you, in the introduction to the A B C book, with what joy and enthusiasm I read the pages of Langstroth on the Honey-Bee, in 1865. I very soon pushed inquiries that resulted in finding Mr. L. still living; and then commenced a pleasant correspondence that was kept up more or less until his death. There was something in his makeup that constantly reminded one of some of the great benefactors of our age—Benjamin Franklin, for instance. His life was so unselfish that he might have lacked the necessaries of life were it not for the many able and willing friends that he was constantly making right and left. May the Lord be praised for those like father Langstroth, who not only make this world a better one while they live, but the memory of whose works will help to make the world better after they are dead and gone.

"The Hum of the Bees in the Apple-Tree Bloom" is the name of the finest bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us *one new* yearly subscription to the American Bee Journal at $1.00.

◆

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last.

Contributed Special Articles



Progress and Possibilities of Bee-Keeping in Great Britain and Ireland.

BY WM. DE COURCY.

WHEN carried out under intelligent management perhaps none of the minor rural industries, such as bee-keeping, poultry-rearing, market gardening and fruit-growing—which are becoming every day more appreciated as worthy of attention—can be made a source of greater profit to the farmer, the artisan, or the laborer than bee-keeping. With respect to this particular pursuit, all classes stand on equal terms, as those having but very small holdings or gardens can keep bees as well as if they were possessed of thousands of acres. Bees are no respecters of rights of properties, they are "monarchs of all they survey", their "happy hunting ground" comprising the area within a radius of from three to five miles from their hives, and over this they forage, weather permitting, taking the nectar and pollen from the blossoms that yield any, but repaying them manifold by fertilizing their seeds or fruit.

Bee-keeping has engaged the attention of intelligent persons in all ages. We have writings on the habits and management of bees by Aristotle, Virgil, and Pliny, which contain a good deal on the subject that is true and useful, though modern bee-keepers will not agree with all that any of them say. It is, however, only with comparatively recent years that the success of this ancient and interesting pursuit has been rendered certain, and that the large element of chance it had included heretofore has been greatly reduced, for, providing the weather is not altogether adverse to the bees and the secretion of the nectar in the flowers, the results of a season are now calculable. Apart, too, from gathering and storing honey, the hive, or domestic bees (*Apis mellifera*), plays an important part in the economy of the farm or the garden by fertilizing the various flora, when they convey the pollen which adheres to the hairs on their bodies from one flower to another, or in some cases from one part of a flower to another part thereof. Without this process many seeds could not be produced, and botanists tell us that the blossom of the apple requires no less then five distinct fertilizations in order to produce a perfectly formed fruit, the failure of one or more of which causes the apple to be formed with one or more sides only partly developed.

Since the establishment of the British Bee-Keepers' Association, in 1874, bee-keeping has made rapid progress, both through the invention of modern appliances and through adopting new methods, and has spread so rapidly in this country that the idea should occur to those who give these matters a thought, that further developments to bring about great results require only a little fostering care from those who are concerned in the industrial welfare of the people. Help from the powers that be, which I mean to refer to further on, at present appears in the horizon in Ireland.

Although many of the mysteries surrounding the hive and its occupants in the past have been unravelled by bee-masters, and new and more favorable methods of treating those most interesting little insects have been discovered and put into practice, leading apiarists have still no doubt of further great developments, till the "little busy bee" will be so submissive to its owner that he can set it to do almost everything but talk to him.

After innumerable centuries of the old, plodding methods of the sulphur-pit—by which the bee-keeper suffocated a colony of his bees worth half a sovereign ($2 50), with the doubtful prospect of getting honey to the value of that amount—a great step in the right direction was taken half a century ago, when the bar-frame hive with its movable combs was substituted for the old time-honored straw-skep. Though reference to bee-keeping and descriptions of the habits and instincts of the honey-bee are to be found in the works of many of the most ancient writers, is it not strange that it was only in 1857 that comb foundation—which is the root of the great success in modern bee-keeping—was invented? The apiarists of the world are indebted to a German for this valuable invention, which, however, was improved and perfected in America—notably by Mr. A. I. Root, of Ohio.

In 1881, the Irish Bee-Keepers' Association was founded by a few of the leading bee-keepers in Ireland, meeting in Dublin, "with"—to quote a short paragraph from its annual report—"the twofold object of advocating the more humane and intelligent treatment of the honey-bee, and bettering the condition of the cottagers of Ireland by the encouragement, improvement, and advancement of bee-culture". Thus, it will be seen that the British Association had seven years start of the Irish one, but the latter has now been 23 years in existence. During these 23 years the Irish Bee-Keepers' Association has been trying to do for Ireland what many foreign governments have been doing for their respective countries. But on account of the limited means the work of the Association has, of course, fallen far short of the requirements of the industry. The committee claims in one of its reports to have endeavored to carry out the objects of the Association as far as funds permit, but adds, "There still remains, however, a very great deal of work to be accomplished". So there does, and would it not be deplorable to continue to let thousands of pounds worth of honey go to waste every year—in this poor country—that can be gathered from the flowers by the bees without interfering with any growing crops but those they improve?

APIARY IN IRISH VILLAGE GARDEN, ALONG WESTERN WALL—EASTERN ASPECT.

It is surprising that an apiary is not found on every farm and every garden, large or small, in view of the direct pecuniary results that may be obtained from it by careful and systematic management. The number of colonies kept, would, of course, depend upon the interest taken by each bee-keeper in the work, the time at his disposal, and on the extent of bee-pasturage within flight-range of the apiary. But certainly a few colonies may be kept in almost any garden or plot, if only as a source of interest and a means of procuring a wholesome and pleasant food of what I might call one's own production.

The effects of agricultural depression, owing to many causes, have been felt for many years throughout the country; prices of agricultural produce have fallen to an extent that it is sometimes difficult, if not impossible, "to make both ends meet". To minimize the effect of this general downward tendency various means have been suggested by those interested in the development and prosperity of agriculture, which is the fountain-head of all other industries. Much good has been done by the adoption of many of these suggestions—such, for instance, as the improved system of dairying, more extensive and better management of poultry, fruit-culture, the manufacture of jam and several other cottage industries, all of which have been encouraged and developed within the past decade. But important and valuable as such industries are as a means adopted to add to the profits of ordinary farming, there is an equally interesting, intellectual, and at the same time exceedingly rural occupation in bee-keeping which, when properly, that is, intelligently pursued, proves of great value to the agriculturist. The extension of bee-keeping as a means of adding to one's income has been rapidly going ahead since it has been demonstrated that bees can be managed without discomfort to the operator or interfering with his ordinary pursuits to any appreciable extent, and that a profit of from 50 to 100, or even 150, percent is by no means an uncommon occurrence.

When we look at the rapid strides bee-keeping has made during the last few years, it appears scarcely credible that it was quite an exceptional thing about two decades ago, to see a bar-frame hive in a cottager's garden. Now, owing to the exertions of a few, and to the spread of information contained in periodicals—some of which are exclusively devoted to bee-culture, and others which give a share of their columns to its advancement—this most useful and interesting industry has spread itself not only over the British Isles, but through every country even to the Antipodes.

Bee-keeping, when once commenced in real earnest, is an employment few get tired of; enthusiasts in bee-culture are the rule, not the exception, because it presents inducements that can not be found in any other description of agricultural pursuits. Who can watch a colony of bees—be it in an ordinary skep, a bar-frame, or an observatory hive—without gaining intellectually? And we can say without fear of contradiction that no description of stock-keeping is a greater financial success than bee-keeping, when nothing is left undone to work it for all it is worth by those who know how. If the old straw-skep of our forefathers had been occasionally a source of income, how much more so is the modern hive, replete with all the improvements introduced by intelligent and ingenious bee-keepers and bee-appliance manufacturers all the world over?

Many persons suppose that it is necessary to have a large garden in the country to keep bees and get a good return of honey from them, but this is quite a mistake. No doubt bees will do better in a district where they are in the midst of fruit-blossoms in April and May, and white clover (*Trifolium repens*) and alsike (*Trifolium hybridum*) in June and July, than in a city where they have to fly a long distance to reach the open country; but bees can be, and are, kept with much profit even under the disadvantages just mentioned. Bee-keepers, whose apiaries are at the rear of houses in some of the busiest thoroughfares in London, are not only successful with their bees, but frequently carry away first prizes for their honey at the London and other apicultural shows. Bees are also profitably kept in central places in the Irish metropolis (Dublin), and I dare say the same thing exists to a greater or less extent probably in every city and town in the British Isles.

Bees do remarkably well in the suburbs of large cities where the succession of flowers in the gardens of the suburban houses and villas affords them a constant supply of honey and pollen from early spring until the end of autumn. Nor is the forage of the city or the suburban bees—to give them their full title—confined to local flowers and fruit-blossoms, for with the advent of the white clover in June or July, they sally forth on every fine day in search of "fields and meadows sunny", and join their rural sisters in gathering nectar from this "queen of honey-plants", as it is designated.

Fortunately for us, very few enemies of the bees exist in the British Islands in comparison with those that are to be found in other countries, and with few exceptions—which do not come under the definition of the term "enemy"—little fear need be entertained of much damage occuring through their depredations. Various birds are included among the enemies that attack a colony of bees openly, and that commit the greatest amount of damage. Next in importance are wasps, toads, mice, moths, and spiders. Although the laying workers—as every experienced bee-keeper knows—are capable of committing greater

APIARY IN IRISH VILLAGE GARDEN, NEAR NORTH WALL—SOUTHERN ASPECT.

damage to colonies of bees than any of the above, they are not usually styled bee-enemies. Bee-pests among the feathered tribe may be divided into two classes—domestic and wild. Among the former, ducks are found to be the most destructive; they seem quite sting-proof, and will stand watching at the entrances of hives ready to gobble up the bees almost as fast as they emerge or alight. Hens will also frequently contract the habit of bee-killing, and less frequently turkeys; but in all cases of domestic birds, as well as with most wild ones, it appears to be individual birds that contract this habit. Therefore, the whole members of scarcely any species or variety must not be branded as "apicides". In fact, I have frequently allowed poultry of every variety to go through my apiary at all seasons without check, only excluding any occasional culprit that might turn up. But I by no means recommend this practice, for unless the apiary is constantly under the observation of somebody, a great deal of harm may be done before the mischief is detected. A fowl snapping at bees at the hive-entrance will be very soon joined by others, and these will probably join in the fun when they see what is up.

Of wild birds, the great tit (*Parus major*) and the blue tit (*Parus cæruleus*) are both addicted to the habit of killing bees; watching at the entrance of the hive and catching the bees as they emerge from it. The cole tit (*Parus ater*) will sometimes eat a few dead bees, which are usually found on the ground under the entrance to the hives, but I have never seen any member of this variety killing bees, though some writers imagine they do; but this is probably because they may have occasionally seen these harmless little birds visiting their apiaries with the object I have stated. Many bee-keepers have also supposed that the swallow (*Hirundo rustica*), the swift (*Hirundo apus*), the martin (*Hirundo riparia*), are enemies to hive-bees, but I do not concur in this idea, and I am glad that I can bear testimony to clearing the character of these beautiful harbingers of spring against such a charge. I have frequently, for years, watched the swallows dart through numerous bees in their flight to and from their hives, and never have I seen these birds kill a single bee. Indeed, on the contrary, they always appear to keep clear of them. Some writers on bees assert that they have "often watched them chasing the swallows away from the vicinity of the apiary, especially in early autumn, after the honey-flow had ceased, when the irritability of bees is very much increased". Though I have never noticed anything like this occur, I have no reason to doubt the statement in view of the way I have seen swallows "fight shy" of bees when they met them in their flight near the apiary. I have noticed fowls, more than once in summer, chase and capture blue-bottle flies buzzing about the fronts of hives right in the thick of numerous honey-bees on the wing, which the fowls did not seem to mind.

The latest stimulus to bee-keeping in Ireland is the formation of the "Irish Bee-Keepers' Federation" some two years ago. The avowed object of the Federation is to "improve the prospects of bee-keepers in Ireland as a national industry".

For individuals, membership consists in the holding of at least one pound ($5.00) share in the Federation.

The Irish Agricultural Organization Society has already formed local bee-keepers' co-operative societies in different districts in Ireland, and these societies may become members of the Federation by the holding of five £1 shares, and one extra £1 share for every five members over 25 in the local co-operative society, and thus a society's members will be entitled to the privileges of the Federation as if they had become share-holders direct to the latter.

The general rules of a local co-operative bee-keepers' society are those under the Industrial and Provident Societies' Act 1893, which are in force for all Industrial and Productive Societies, but these rules are subject to special rules devised by the I. A. O. S. to suit each different kind of co-operative society. A few extracts from the special rules of co-operative bee-keepers' societies will give a fair idea of what they are like:

Rules I and II refer—To the name each society may be called, and the registered office of same.

Rule III states—The object of the society shall be to develop and improve among the members of the society the industry of bee-keeping, and any industry allied thereto or arising out of bee-keeping; to furnish its members with the technical instruction needful to carry on their industry in the best manner; to buy hives or any other requisites which may be required by its members; to sell honey, beeswax, or other products of the industry, and to secure for members the profits derived from the sale.

Rule IV fixes the shares at five shillings each, payable in the manner following: One shilling (about 24 cents) on application, and the remainder in such calls as the committee of the society may from time to time direct, at least 14 days' notice being given of each call.

The object of having the shares so low is to enable bee-keepers of small means to become members at one share each, while those in better circumstances are expected, but not obliged, to take several to make up the necessary share capital. Should the ordinary share capital not be sufficient to carry on the business, the society may issue transferable preferential shares to such amount as the ordinary business meetings may determine, and subject to such authorization, to an amount equal to its subscribed ordinary share capital. As, however, the issuing of preferential shares is not quite in harmony with the principle of co-operation, as propagated in Ireland by the I. A. O. S., the formation of such share capital is only resorted to when it is absolutely necessary to do so.

"The society may also issue guarantee shares to its members to any amount, such shares to be utilized solely for the purpose of securing capital necessary for its business. Such guarantee shares shall be withdrawable on the holder giving six months' notice in writing, but may be cancelled by the committee at their discretion". I am not aware, however, that guarantee shares have been issued or applied for in any of the co-operative societies.

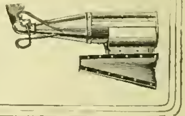
The Irish Bee-Keepers' Federation, Ltd., is formed for the advancement of their own interests. It provides all necessary requisites for its members on the lowest terms, and markets their honey and other bee-products to the best advantage. It supplies commercial advice to local societies, and meets the various needs of the industry as they arise

The Federation is managed by a committee elected by the members, the Federation Local Co-operative Societies being entitled to vote in proportion to the number of their members.

County Kilkenny, Ireland.

OUR TOIL DOTH SWEETEN OTHERS

Proceedings of Conventions



Report of the Fourth Annual Meeting of the Texas State Bee-Keepers' Association, Held at College Station, Tex., July 5 to 8, 1904.

REPORTED BY LOUIS H. SCHOLL.

(Continued from page 6[illegible]4.)

Mr. H. H. Hyde read a paper on "The St. Louis Convention, and When and How to Go." [As it is now too late for the publication of this paper to do any good, it is omitted.—EDITOR.]

NUMBER OF COLONIES FOR GOOD BEE-RANGE, AND COST.

The question, "How many colonies will a good range support, and what should the bee-keeper pay for such location?" was discussed with quite a difference of opinion.

Mr. Weaver said that it depended upon locality entirely as to the number that it would support. A good locality will support a larger number in certain years and in some years it will not stand half as many. If there is a regular honey-yield in every year, then the number would remain the same. As to paying for a location, that all depends, too. Some people will not want any pay of any kind where you locate an apiary on their place. In such cases it is a good idea to keep them well supplied with as much honey as they will need for their family use. This will amount to from five to ten dollars, all according to the output of the season.

H. H. Hyde said a bee-keeper should pay for a location on a reasonable basis, say about 10 cents per hive. Where 50 colonies were put in a yard they generally paid five dollars for the location; if 100 colonies, then ten dollars. If no money is wanted and the people liked honey, then honey is given instead.

Mr. Aten favors reasonable compensation for apiary rights. He said that there are many people who will not be persuaded to take any compensation of any kind, and in such cases it is a good idea to present them with some nice honey at times. Give them the very nicest that you have.

Mr. Laws said as the bee-keepers are dependent upon the land-owners for locations for their apiaries, they should be paid, and paid well. If the friendship of the land-owner is cultivated and maintained he will look to your interests and there will be less trouble about locations for one's bees. It is no small matter if one is compelled to move his bees from a good locality on account of dissatisfaction on the part of the land-owner. A good location is worth a great deal to the bee-keeper, therefore he should do all that is right in paying for such location.

Willie Atchley said that there is no difference in the yield whether there are only 50 or whether there are 400 colonies in a good locality. During a honey-flow of such a locality the 400 cannot gather all of the honey in the fields. During a poor year the 50 will make a better average than if there were more in that locality. One hundred in a yard are however better than more in one locality in the springtime when breeding is going on.

It seems that when the honey-flows open in those localities in Southwest Texas they are inexhaustible at the time they are on, but in the spring the forage for brood-rearing is more scarce. That, therefore, would make a difference in the early part of the year, while it does not make a difference later in the season.

In regard to pay for such locations, he has made arrangements with the large ranch-owners by which he has a right to establish apiaries on the ranches, and others are excluded from them. For this right he pays thirty dollars.

REPORTS OF COMMITTEES.

On Inspecting the College Apiary:

We, the Committee, have visited and inspected the State Experimental Apiary at College Station and find that the bees are in good shape for experimental purposes.

W. E. Crandall,
W. H. White,
H. A. Mitchell,
R. C. Knowles,
J. W. Wolf.
Committee.

On Resolutions:

Resolved, that we, The Texas Bee-Keepers' Association, extend our thanks to Professors Sanderson and Scholl and other officers of the A. & M. College for the kind reception we have received by them and the College Administration in general.

Resolved, that we extend our sincere thanks to the press and every newspaper for the support and the kindness they have shown us in helping in advertising all the meetings of our Association.

Resolved, that we extend a cordial invitation to the National Bee-Keepers' Association to meet with us at San Antonio, Texas, next year.

Willie Atchley,
L. Stachelhausen,
Committee.

On Inspecting the Association's Books:

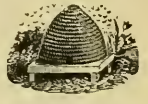
We report for the Committee of Examination of the Secretary-Treasurer's books, that we find them in first-class and correct condition for the limited time we have had in examining them. W. H. Laws, *for Committee.*

On Transportation:

We have been informed by all local express agents, that

(Continued on page 68[illegible].)

Our Bee-Keeping Sisters



Conducted by Emma M. Wilson, Marengo, Ill.

Bee-Keeping for Women—Heddon-Plan of Preventing Afterswarms.

Dear Miss Wilson:—I live in a beautiful little village, and have an ideal place for bees. The trees are low, and consist of apple and cherry trees, so when my bees swarm they never go high, and even when they try it I am ready for them with my sprayer. I have had good years and poor years, but I never get discouraged. I love my work and take an interest in it, and, besides, it nets me quite a little sum every year.

I think bee-keeping is fast becoming a woman's industry. There is no work so healthy and interesting as bee-keeping.

I started with one colony, which increased during the season. I lost a few last winter, and now have 27 good, strong colonies. I work my bees on the Heddon plan in swarming. I very seldom have second swarms. I prefer this method to clipping the queen's wings.

I often wonder why more women do not keep bees. I remember the first super of honey I took off, and how we did enjoy that honey! I have all the books on bees, and although I have learned a great deal from them I have learned a great deal also from experience. One should study the bees while working with them, and when a summer comes with a poor honey crop, don't give up, but hope for the better crop next year. There is where success in bee-keeping comes in. Mrs. J. L. Antes.

Lake Co., Ill., Sept. 1.

Some may inquire as to the "Heddon plan in swarming" referred to by Mrs. Antes, that is, the Heddon plan of preventing afterswarms. Mr. Heddon says:

"Let us suppose that colony No. 8 swarms June 15. With a non-erasive crayon we mark upon the hive 'O, June 15', and on the hive in which we put the swarm, 'S, June 15'. Thus we distinguish the old colony from the swarm at a glance, as we make these marks in large characters.

"When we hive the swarm (always on full sheets of wired foundation), we place it on the old stand, moving the old colony a few inches to the north (our hives front east), with its entrance turned northward, away from its swarm about 45 degrees. As soon as the new colony is well at work, having their location well marked (say two days), we turn the old colony back parallel with the new one. Now, both hives face east, sitting close beside each other. While each colony now recognizes its own hive, they are, as regards all other colonies, on one and the same stand.

"The dates on the back ends of the hives indicate that second swarming may be looked for about June 23. About two or three days before that date, and when the bees are well at work in the fields, we remove the old hive to a new location in another part of the apiary. This depopulates the old colony, giving the force to the new, leaving too few bees in the old one for the young 'Misses' to divide; and as they at once recognize this fact, they fight it out on the line of 'the survival of the fittest.'"

Mr. Heddon deserves great credit for introducing this plan, which he gives in his book, "Success in Bee-Culture", and nearly 20 years ago in Gleanings, but the plan has been simplified, perhaps by Dr. Miller, after this fashion:

Put the swarm on the old stand, setting the old hive close beside it, both facing the same way. Six or seven days later remove the old colony to a new location. That's all there is to it. The mother colony will thus be reduced

MRS. ANTES AND PART OF HER APIARY.

to just as weak a condition as if the other manipulations had been made, and with less trouble.

Mrs. Antes says she prefers this to clipping the queen, but the two things are quite separate. Clipping a queen's wings does not in the least prevent a second swarm, but does prevent the first swarm from going off with the old queen.

Our Changeable Climate.

What a changeable climate we have had this summer. One day very warm, and the next cool. And especially is this true of September. One day this week the thermometer stood at 85 degrees, and the next as low as 40 degrees.

In the main it has been a delightfully cool, pleasant summer; but not *good bee-weather.*

Looking After the Beeswax.

Bee-keepers, as a rule, are such very busy people that everything that can be set aside during the harvest is likely to be postponed to some future time, and looking after the beeswax is one of the things likely to be so treated. Perhaps few of us are as careful as we might be about saving the little bits of wax. If we have some handy receptacle in the apiary into which they can be thrown they are much more likely to be saved, and they are well worth saving. Now that the harvest is over, it is a pretty good plan to get all the wax into marketable shape at once.

Paste of Marshmallows Root With Honey.

Steep ⅜ ounces of marshmallows root in ½ pint of water; add 3 ounces of gum arabic. When the gum is dissolved, let settle, and pour off. Replace on a slow fire and add 3½ ounces of liquid honey, stirring constantly. Add the white of an egg beaten to a froth. When it will no longer stick to the fingers pour upon a surface powdered with starch.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses. By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

QUEEN AND HER RETINUE—WHAT SHALL WE CALL THEM?

Good thing to have a fixed name for each of the essential things of apiculture *if we don't try for too terrible a sort of fixedness.* When a man calls a thing by an intelligent name it is rarely advisable to scold him. Virgil got praise instead of dispraise for using 12 different names for beehive. Thirteen out of 24 experts indorse colony as the proper name for queen and retinue. No other name gets enough to stand up in a row. Such things do not have to "go on all fours", not at all, else colony would not do. Among human beings a colony is a large number of families which have branched off from some previous state and founded an organism of their own; while queen and 40,000 bees are all one family. Yet the term family gets almost no support. One reason may be that our minds do not take kindly to the idea of a family of such enormous size. Also, by such nomenclature, we lose the likeness between the founding of a colony and the swarming of bees, and we want to keep that. Also, when we think of a family, the idea of each member, or nearly each member, filling a niche altogther his own, is prominent in mind; and a myriad of repetitions of the same identical unit make the term seem incongruous on that account.

There is also a contest between queen and mother as name for the first lady of the coop. Queen fails to express important functional relations; but likewise mother fails to express other important ideas. Fight would be nearly a stand-off if we were beginning brand new; and we are not doing that by any means. As queen has long been in full possession she is quite certain to stick.

How nice it would be if we could all have as much faith as G. W. Demaree! He says, "I believe the mother honey-bee, with her brood, would be satisfied with the name of 'hive-hold of bees'". With such faith spread abroad, the horizon would be full of mountains moving and skipping around. Page 596.

ALFALFA EXPENSIVE WHERE WATER IS A LUXURY.

Ten crops of alfalfa in a season, and two tons at a crop! I don't know but we shall have to borrow some of the faith mentioned above, friend Cook.

But here's an important point Prof. Cook sets before us which is meaty, and unthought of by most of us. We contemplate oft the wax-honey ratio, what is the hay-water ratio? How many pounds of water does a plant have to use in order to lift out of the ground and elaborate one pound of dry product? Guess! Five pounds. Twenty pounds. Prof. Cook tells us the average is 325 pounds! And alfalfa uses much more than the average—something over 400 pounds. It calls for the whole of six inches of rain (fallen on some distant surface perchance) to make one full crop. This is not one of the merits of alfalfa, but one of its worst shortcomings. Where water is expensive, and *all* has to be brought, alfalfa hay is too awfully expensive. Page 597.

CLEOME AND RED CLOVER GOOD SPREADERS.

Pretty good spread has cleome if one select plant opens 4,209 flowers at a time. Still I imagine a select red clover can be found to beat it. Say 50 heads on the plant, and 200 florets to the head. That would be 10,000. A red clover, give it good soil and room enough, spreads itself immensely. Page 598.

ARE THE BIRDS GUILTY OR NOT GUILTY?

"When Greek meets Greek then comes the tug", etc. When the professional, college entomologists meet the professional sportsmen and nature-observers on the king-bird question, there's a chance to see fur fly. H. B. Terril, page 604, and the Virginia bee-keeper, page 622, seem rather to come out ahead so far. Failing to find bees in a bird's crop is no evidence of its innocence. If you, Mr. Professor, should shoot a dozen country schoolboys in the clover fields, and totally fail to find a single bumble-bee in any of their stomachs, all that wouldn't prove that the schoolboy never catches bumble-bees to suck their honey. Certainly guilty of doing just that trick sometimes. The slender-billed birds, such as perforate and suck grapes, can proceed in the same way with bees. The redbird which caught and dropped 85 bees on Mr. Terril's hive seems to have done this. Birds with blunt bills can proceed as the schoolboys do, tearing the bee apart and swallowing only liquid contents—nothing that would appear on a post-mortem examination. If a bill is big enough it might be used as a crushng honey press. I would be glad to believe the birds all nnocent, but it hardly looks that way; and the disposition just now prevalent to formally pronounce them absoutely not guilty is premature, I fear.

On page 622 there seems no chance of mistake. Either an apparently candid and careful observer is lying or these birds killed bees at a dreadful rate. Interesting to note that the Virginian king-bird did not leave his dead bees all looking just alike, but some much torn and some torn but little. Consolidating the work of the two birds on three separate occasions, we find they captured almost exactly a bee a minute—the old one six bees in five minutes, and the young one four bees in five minutes. Didn't get every bee they made a dive for—the old one getting four bees out of five attempts, and the young one three out of four. The number of bees found in the piles fell a few short of the number they were seen to have. These presumably were thrown away while on the wing after the next bee.

But the climax number on page 623 is wild—else summers are very long in Virginia. It would require 822 days to destroy 378,000 bees at 450 per day.

Ask Doctor Miller ??

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. MILLER, Marengo, Ill.

Proportions of Honey and Pollen for Wintering.

I have the 10-frame Hoffman hives. The bees seem to be carrying in an immense amount of pollen. Is there any danger of getting too much pollen? and what proportion of honey and of pollen do they need to winter all right?

MISSOURI.

ANSWER.—It is pretty safe to trust the matter entirely to the bees. I don't know just what proportion is best, but it would probably be no harm to have one-fourth as much pollen as honey. Next spring you'll find that they'll use up pollen rapidly in brood-rearing.

◆

Honey-Dew—Non-Swarming—Preventing Increase—Winter Passages—Best Brood-Frame.

The bees are gathering large quantities of honey-dew from the soft maple trees.

1. Is the honey good to eat?

2. Will it hurt the bees to have some of it for winter food?

3. Does a white, cotton-like substance, firmly attached to the twigs of the trees, always accompany the aphides?

4. What is this substance?

5. I have quite a number of sections of it, and if it is not good to eat what shall I do with it? I have no extractor.

6. I have a colony in an 8-frame dovetailed hive which has not swarmed this season. It was a swarm last season, but it sent out three swarms the same year. I have taken 141 pounds of honey from it this season, with about 50 pounds more nearly ready to come off. It was treated like the rest of the colonies, all of which swarmed. Why didn't it swarm?

7. Is this yield usual with colonies that do not swarm?

8. Is the following method all right to use to prevent increase:

Let the swarm issue, kill the queen and send the swarm back; wait seven days, then cut out all the queen-cells but one. I tried this method with one colony, and it was quite successful.

9. Will it always be successful?

10. If not, what method would you suggest?

11. How much honey will a pound of comb store if cells are the usual size?

12. How many colonies would keep one man busy during the summer?

13. Do you think it necessary to cut winter passages in brood-combs? If so, when is the best time if frost comes the middle of September?

14. Of all the different brood-frames which do you like the best?

WISCONSIN.

ANSWERS.—1. It's all right if it tastes right.

2. There are kinds of honey-dew that are bad for winter stores, but I *think* this kind is not.

3 and 4. No, only particular kinds have this woolly substance, and if I mistake not it is part of the insects themselves.

5. Honey that is not good for table or winter feed may be safely fed to the bees in spring.

6. Be thankful you have a colony that stores instead of swarming without questioning why. I can't tell you why they don't swarm, any farther than to say that there is a difference in bees themselves, some being more inclined to swarm than others; and when you find a colony that makes no offer to swarm, and piles up a lot of honey, it is a good plan to breed from such a colony. There is, too. a difference in seasons as to swarming. Last year was a very swarmy year here, while this year many of my colonies made no attempt to swarm.

7. A colony that does not swarm may give all the way from a very poor to a very good yield, but it will give more than it would if it swarmed, and the record takes are usually from the colonies that do not swarm.

8 and 9. The plan is good and will usually be successful; but sometimes you may miss a cell, and sometimes the only cell you leave may be bad.

10. You will make a safer thing of it if you allow the colony to swarm with the first young queen. Put the swarm on the old stand, setting the old hive in a new place. A day or so later, when all the queens in the old hive have been destroyed but one, return it to the old stand and shake the swarm into it.

11. I don't know; but 200 pounds have been estimated.

12. From 50 to 200, according to the man and the management.

13. It is not necessary nor advisable. Let the bees have a chance to go over the top-bars to get from one comb to another.

14. The Miller frame, and I'm ready to discard that as soon as I find something better.

◆

Pollen—Queen-Traps—Sealed Covers for Cellar-Wintering—Other Questions.

1. Do bees carry pollen all summer?

2. Do you recommend queen-traps in swarming-time for unclipped queens?

3. Do bees become queenless after the honey season is over (September)?

4. Would you remove supers before the first frost, or wait, there being lots of goldenrod and fall flowers as yet?

5. Do you examine the new swarm every few days? If not, what is your plan?

6. Do you recommend sealed covers for cellar-wintering, the cellar being damp?

MINNESOTA.

ANSWERS.—1. Yes.

2. That depends on circumstances. If you allow natural swarming, and cannot be on hand to see when they swarm, it's a very nice thing to have a queen-trap to hold the queen till you get around; thus saving the loss of queen and swarm.

3. Probably it does not often occur. But don't decide that a colony is queenless because you find no brood in September. Sometimes a queen stops laying very early in that month.

4. Go by the yield. So long as the bees are storing honey that you want in the supers, leave them.

5. There's no need to go through a new swarm, is there?

My plan would be to let them alone.

6. I put my bees in the cellar with covers sealed down; but they have entrances full-width two inches deep. With very small entrances there should be upward ventilation.

TEXAS CONVENTION—Continued from page 681.

vegetables is to elect a man and pay his way to see that the express commissioners and managers do recognize us, our business, and our convention, and bee-keepers ought to help this man and stand by him.

L. Stachelhausen,
H. A. Mitchell,
Will Atchley,
Committee.

On Soliciting for Defraying Expenses in Getting a Foul-Brood Law:

The committee reports that the sum of $65 has been subscribed by the members present, and that more would be subscribed if necessary.

F. L Aten,
C. E Ttibe,
Udo Toepperwein.
Committee.

On Statistics:

Reported that the members present at the last days' meeting represented 5,650 colonies of bees. These were from 35 members. H. H. Hyde, *Committee.*

It was decided to get up the statistics of all the members of the Association as soon as it could be done.

As a committee for next meeting's program, F. L. Aten was appointed.

The following were appointed as a committee to go to St. Louis to represent the Texas bee-keepers, and request the National to meet in Texas next year: L. H. Scholl, D. Krebs, H. H. Hyde.

Thus was closed one of the most important meetings of the Texas Bee-Keepers' Association during its history. Every bee-keeper present was well pleased with the time that he spent here during the meeting of the great Farmers' Congress.

Between sessions inspections of the different departments of the College were made. The apiary was visited by many, and the bees were examined by those interested. Others went through the honey-house, which is one of the best for the purpose in the country.

Here, also, can be seen all the appliances and the different styles of hives used in bee-keeping, both new and old. Different races of bees are kept in the apiary, as well as different arrangements of hives and supers.

The associations that were represented at the meeting, and who sent delegates, are as follows:

North Texas Bee-Keepers' Association, W. H. White.
South Texas Bee-Keepers' Association, Willie Atchley.
Southwest Texas Bee-Keepers' Association, H. H. Hyde.
Texas Honey-Producers' Association, W. E.
Nueces Valley Bee-Keepers' Association, W. H. Laws.
Bexar County Bee-Keepers' Association, Udo Toepperwein.
The Pan-Handle Bee-Keepers, J. E. Lutz.

The honey and bee exhibit was very fine. There were prizes awarded to the exhibitors, consisting of blue ribbons for first, and red ribbons for second premium.

Louis H. Scholl, *Secretary.*

(The End.)

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Select Tested	2.00	10.00	18.00	1.50	8 00	15.00
Select Breeders						$3.00 each

Send for Circular.
JOHN M. DAVIS, Spring Hill, Tenn.
Please mention Bee Journal when writing

Reports and Experiences

OUR TOIL DOTH SWEETEN OTHERS

Bees Doing Very Well.

My bees are doing very well this season. I had two colonies in the spring, and increased to 3. I had several swarms, but always returned them in order to retain the surplus. I will get over 150 pounds of extracted honey, and I had about 20 well-filled sections.

I read the American Bee Journal with interest, and I regard it as a great assistance to an amateur bee-keeper. C. D. S.

Essex Co., N. J., Sept. 20.

Heavy Rains Good for the Honey Crop.

It commenced to rain in northern and central California on the 22d, and never have such rains fallen so early in the season. This is the third day, and the end seems not in sight. In this city, last evening, there was quite a thunder storm, with the brightest kind of lightning. Much damage will be done to grapes and some other fruits; also to hay, grain, beans and other crops yet in the fields. Bees will

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38E4t Write for illustrations.

be the gainers, as the fall and winter flowers will be more numerous. "'Tis an ill wind that blows no one good."

W. A. PRYAL.

San Francisco Co., Calif., Sept. 24.

Honey Crop a Failure in Nevada.

Nevada will have no honey crop to speak of this year. Placing it at one-fifth or one-sixth of a crop would make it about right. Grasshoppers and too much water are the causes of a failure.

E. D. COOLEY.

Humboldt Co., Nev., Aug. 29.

Wintered Poorly—Season too Damp.

Bees wintered poorly last winter, my loss being 25 percent. My surplus will be about 3 pounds of comb honey per colony, spring count. It has been too wet to secure best results.

GEORGE STOUT.

Hennepin Co., Minn., Sept. 15.

Poor Year for Bees—Wintering.

This has been the poorest year for bees in this part of the country we have had in years. It has been too wet. We have not had a swarm this year, although I never allow my bees to swarm when I can prevent it. I make brush swarms when I want increase, or when they get the swarming fever so badly that I can not prevent swarming. I use the 8-frame dove-

The Demand for
Moore's Strain of Italians

was so great in July and August that he was compelled to withdraw his "ad." from the American Bee Journal, to keep from being overrun with orders; but he is now UP WITH ORDERS, and sending Queens BY RETURN MAIL, bred from his FAMOUS LONG-TONGUED RED-CLOVER STOCK, which has won a world-wide reputation for honey-gathering, hardiness, and gentleness. This is the same stock which W. Z. Hutchinson advertised for several years under the name of "SUPERIOR STOCK."

Prices: Untested Queens, 75c each; six, $4.00; dozen, $7.50. Select Untested. $1.00 each; six, $5.00; dozen, $9 00. Safe arrival and satisfaction guaranteed. Descriptive circular free.

Address, J. P. MOORE,
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The Passenger Department of the Illinois Central Railroad Company have recently issued a publication known as Circular No. 12, in which is described the

best territory in this country

for the growing of early strawberries and early vegetables. Every dealer in such products should address a postal card to the undersigned at DUBUQUE, IOWA, requesting a copy of "Circular No. 12."

J. F. MERRY, Asst. Gen'l Pass'r Agent.
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It is equipped with all the modern machinery, and with our new patent Section-making machine, one man can turn out 250 Sections a minute.
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tailed hive, with shallow extracting-supers, and run for chunk comb honey entirely. I sell it at home at 12½ cents per pound.

I keep the colonies strong, and do not have any trouble with moths. I have taken 90 pounds of honey from some of my colonies this year, poor as the season has been. I just cleaned up for the season to-day (Sept. 20). The colonies are all in good condition for winter. I winter them on the summer stands, but always give some kind of protection. The weather is too changeable here to winter them unprotected.

J. W. Ferguson.

Lawrence Co., Mo., Sept. 20.

"Combed" and "Extracted"

Scraping Sections on Wire-Cloth.

Chester A. Olmstead explained his rapid method of handling comb honey, scraping and crating it. He said a great deal of time is unnecessarily wasted by many a bee-keeper in getting his honey ready for the market because his comb-honey supers are faulty. The scalloped bottom-bars of section-holders, he said, are a nuisance, as the sections and bottom-bars do not fit each other exactly, causing propolis to be deposited in places where it can not be gotten at very readily. If all the gluing is done on the bottom or top of the section or the *out* edges of the (beeway) section, then it can be scraped off easily and quickly by sliding the sections over a tightly-stretched piece of wire screen of one-quarter inch mesh; whereas, if any glue is deposited in the scallops it has to be removed with a knife, which takes more time.

He does not use a top-bar to his section-holders; but for what reason I do not now recollect. The section-holder

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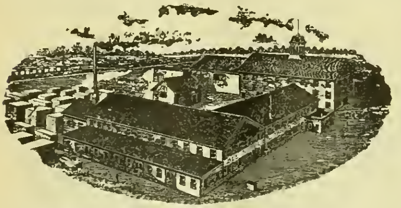

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A Journal that is over a quarter of a century old and is still growing must possess intrinsic merit of its own, and its field must be a valuable one. Such is the
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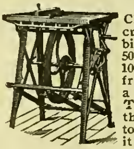

Read what J. I. Parent, of Charlton, N. Y., says: "We cut with one of your Combined Machines, last winter 50 chaff hives with 7-in. cap, 100 honey racks, 500 brood, frames, 2,000 honey boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.
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8-Frame 1 1-2 STORY Hive for $1.
This hive is rabbetted at corners; is the best $1 hive made. No. 1 Sections, $4; No. 2, $3.50. Shipping-Cases, 12-lb., $8 per 100; 24-lb., $13; 20 lb. Danzy, $10; without glass, 50c less per 100. Dovetailed Hives, Foundation, Smokers, etc., CHEAP. Send for List.
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Italian Queens secured by a cross and years of careful selection from Red Clover Queens and Superior Stock obtained of W. Z. Hutchinson. I can furnish large, vigorous Untested Queens at 75 cents; after June 15, 60c. Tested Queens, $1.00; after June 15, 75c. Write for discount on large orders.
CHAS. KOEPPEN,
22Atf FREDERICKSBURG, VA.

with a top-bar (in other words a wide frame) is my own preference; and why this of A. I. R.'s invention has ever been relegated to the things of the past (by the manufacturers) is really more than I can understand. I can not yet believe that the honey-producers are wholly to blame for that, although I find but few of the bee-keepers around me who speak in high terms of it. I have heard many objections raised to the wide frame, particularly by those who had had no experience with it; but none of those objections have been worthy of any consideration. I believe I am in a good position, judging from the merits of the wide-frame super as compared with other kinds, as I have the different styles in use. Give me the wide-frame super, every time. I can handle them quicker on and off the hive; I can take the honey out quicker than from any other super, and I can certainly clean more sections from them in a given time. I have many a time been greatly surprised to learn how long it took some of the friends to case their honey. With wide frames it is a short job indeed, and I have not used Olmstead's screen-scourer either. But it is with my sections as Mr. O. says: The propolis is just exactly where it can be scraped off with one swoop, and no fooling. I fully agree with Mr. Olmstead—no scalloped bottom-bars for me. A straight and (if anything) a narrower bottom-bar than the bottoms of the sections is what I want, and top-bar the same. Whether the separator is solid wood, fence, wire screen, or what not, is another consideration which may be taken up at another time.—F. Greiner, in Gleanings in Bee-Culture.

CONVENTION NOTICE.

Wisconsin.—The convention of the N. E. Wisconsin Bee Keepers' Association, to be held in the Opera House at Mishicot, Oct. 25, 1904, will be called to order at 10 a.m. Election of officers and other important business will be transacted in addition to the program recently published in this journal. DR. J. B. RICK, Sec.
Mishicott, Wis.

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Boston pays good prices for a fancy article.
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Honey and Beeswax

CHICAGO, Sept. 24.—The market is now showing more activity. Some small lots of fancy white clover have been sold at 14c per pound, with No. 1 ranging at 12@13c; very little call for other grades. Extracted, white, brings 6@7c; amber, 5@6c, according to quality, flavor and style of package. Beeswax, 28@30c.
R. A. BURNETT & CO.

KANSAS CITY, Sept. 22.—Market on comb honey is quite active at $2.75 per case for fancy white stock. Extracted rather slow at 6½@7c. We look for the demand on extracted to pick up considerably with cooler weather, Beeswax in good demand at 30c per pound.
C. C. CLEMONS & CO.

BOSTON, Sept. 22.—Comb honey continues to come in slowly, while the demand is increasing. Fancy white will bring from 16@17c; No. 1, 15@16c, and No. 2, 14c. The old honey has been practically cleaned up, there being one lot of any quantity left. We look to see our present market maintained right through the season. BLAKE, SCOTT & LEE.

NEW YORK, Sept. 24.—Comb honey is now arriving quite freely and fancy stock finds ready sale at 15c; No.1 at 13@14c; No. 2, 11@12c; no buckwheat on the market as yet. Extracted honey in fair demand at unchanged prices. Beeswax dull at 27@28c.
HILDRETH & SEGELKEN.

CINCINNATI, Sept. 15.—There is an improvement in the honey market, so far as extracted honey is concerned. The demand has increased considerably, but the supply is limited, owing to the fact that bee-keepers in general are mistakably holding their crop for better prices. We quote amber extracted in barrels at 5¼@6c; white clover in barrels and cans at 7@8½c, according to quality. The comb honey situation is badly demoralized, being aught but encouraging. Quote fancy white clover comb honey at 14@15c. Beeswax, 26@28c.
THE FRED W. MUTH CO.

ALBANY, N. Y., Sept. 28.—Our honey market is getting more brisk now. The quality of honey seems to be much ahead of last year. We are selling fancy white comb at 15@16c; [illegible], 15c; No. 1, 14@14½c; mixed, 12@13c; buckwheat, No. 1, 13½@14c; No. 2, 11@12c. Beeswax. 28@30c.
H. R. WRIGHT.

CINCINNATI, O., Sept. 21.—Comb honey is now coming in more freely, and prices if anything have a little moderated. The sales made and prices obtained were for No. 1 fancy water-white comb. 13½@15½c; No. 2, 12½@14c. Extracted is sold as follows: White clover, 6½@8c; amber in barrels, 5¼@5½c; in cans, 6@6½c. Beeswax, 27c. C. H. W. WEBER.

PHILADELPHIA, Sept. 22.—The market for comb honey is very much unsettled at the present time. Quite a few poor lots have been sent in early, and have sold for low prices. Very little fancy has arrived in this market thus far. We quote: Fancy, 16@17c; No. 1, 14@15c; amber, 14c. Extracted, fancy white, 8@9c; amber, 7@8c; dark, 6c. Beeswax. 28c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

SAN FRANCISCO, Sept. 21.—White comb, 1-lb. sections, 12½@13c; amber, 9@11c. Extracted, white, 6@6½ cents; light amber, 5@6c; amber, 4@4½c; dark amber, 3¼@3¾c. Beeswax, good to choice, light, 29@30c; dark, 27@28c.

Spot stocks are of rather light volume and are mostly of amber grade. There is little selling pressure, especially on good to choice honey. Some holders are contending for stiffer figures than are warranted as regular quotations. Not much is changing hands, and business doing is principally on local account.

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Fancy Comb Honey from White Clover,
in no-drip cases, at once. State your lowest price for SPOT CASH, the average weight of honey per comb, all definite and final in first letter. We answer mail and pay for goods promptly. Plenty of references if desired.
Beeswax Wanted for cash or trade.
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Mail sample and state price expected delivered Cincinnati.
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The following cash discounts will be allowed on orders for Supplies for next season. This does not include honey-packages for current use.

6 " " " Nov. 1.	3 " " " Feb. 1.
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4 percent if sent in before Jan. 1.	1 percent if sent in before Apr. 1.

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American Bee Journal

44th Year. CHICAGO, ILL., OCT. 13, 1904. No. 41.

O. D. EDWARDS AND A HONEY-HAND.

H. C. MOREHOUSE.

(See pages 692, 693, 694, 696.)

WM. R. GOULD AND A SWARM.

FOOTE'S
HONEY
HERE

A. F. FOOTE AND SECTION-PRESS

OUR new edition of the A B C of Bee Culture is progressing finely. We expect to have the first copies ready in the coming December. Already we have orders booked for a large number. If you want a copy promptly you had better let us have your order now. Old price: $1.00, postage 20c extra.

THE Root Correspondence School is going to be a success. The readers of The American Bee Journal will remember that we make a special offer to them of the course for $10.00 to a limited number. Ask for our prospectus and particulars.

THE two little books: "Modern Queen-Rearing" and "How to Produce Extracted Honey" are selling fast. They are great value for little money. Fifteen cents each or both for twenty-five cents, postpaid.

IN October the discount on our bee supplies is 6 per cent. Every month you wait it will be less. It's a saving to anticipate your wants. It pays to be ready.

THE A. I. ROOT COMPANY,

MEDINA, OHIO.

Published Weekly at $1.00 a Year by George W. York & Co., 334 Dearborn St.

AMERICAN BEE JOURNAL

Establisht in 1861

The Oldest Bee-Paper in America

Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

GEORGE W. YORK, Editor. CHICAGO, ILL., OCT. 13, 1904. Vol. XLIV—No. 41.

Editorial Notes and Comments

The St. Louis Convention of the National.

This meeting of bee-keepers will be remembered as one of the most harmonious of all gatherings of the National. It was like the calm after a storm, when the Los Angeles convention of 1903 is recalled.

There were 160 members in attendance, with about 25 States, the District of Columbia, and Russia and Cuba, represented. It was somewhat amusing to hear the remark, "This is the largest and best convention of bee-keepers ever held in this country". We mean it was amusing to those who had not missed a meeting of the National during the past dozen years. The Los Angeles convention numbered about 200; the Chicago meeting, in 1900, about 300. And as to the "best meeting"—several former ones were far ahead of St. Louis, we think. But the last one was a good meeting, and very enjoyable in many ways.

There seemed to be an effort to get in some public nominations for officers and directors, which manifestly would have been unfair, and we think contrary to the new constitution, as revised last year. It provides that the Board of Directors shall arrange the details of nominations and elections, and they decided that nominations should be made by the membership through a postal-card informal ballot, which has been done. Of course, it is an experiment, but we say, let the constitution be followed, and if no officers are to be elected at the annual meetings, as was done previous to 1904, then let no nominations be made there, either. Unless *all* the candidates for a certain office were nominated, or mentioned publicly, at the annual meeting, it would be unfair to those omitted, and would give an advantage to those so nominated. If we were a candidate for any office in the National, we would not want to be mentioned publicly at the annual meeting unless the others who might be candidates for the same office were also so named. We would desire absolute fairness to all.

One of the dangers in these things is the tendency to inject questionable political methods. We believe the office should seek the man, and not the man seek the office. Up to the present time we believe that the National offices have, in almost every instance, been given to persons who did not seek them. It's a good plan. Better officers are secured in that way.

So we say, let the National Association keep as far away as possible from political methods that are the least questionable or tainted with self-seeking. Unless it does so, there likely will be trouble ahead, and the Association will become worse than useless to the bee-keeping fraternity and industry, in whose behalf it was organized and is kept in existence.

Next week we will continue these convention comments.

A little later we expect to begin the publication of the report of the St. Louis convention in these columns.

Scraping the Refuse from Cakes of Beeswax.

Generally there is more or less refuse that must be scraped from the bottom of a cake of beeswax, and it isn't the easiest thing to do. Here's a bright kink from J. A. Green, in Gleanings in Bee-Culture, that knocks off three-fourths of the labor:

> "Lay your cake of wax upside down on the grass in the hot sun until the part exposed to the sun is thoroughly softened, while the rest is still hard. You can then scrape it as deeply as you wish, and do it easily. Do not lay it on a board or the bare ground, or it will get hot where you do not want it to."

Candor in Dealing With Customers.

A contributor in the Bee-Keepers' Review, who sells honey partly of his own production and partly bought from others, says:

> "I create the impression that I produce all honey sold by me, but I do not *say so*. A party will say: 'You must have an awful lot of bees'. I answer: 'When I get done I will have 20,000 pounds of honey sold'. It is not always wise to *tell* even the truth, but I make it a point to tell no *lies*."

When the editor allowed that to go to press without note or comment, he lost a fine opportunity to "point a moral", especially for the younger portion of his readers. The contributor does not say anything that, taken by itself, is not strictly true, yet he frankly says that he creates a false impression; which is only another way of saying that he makes his customers believe that which is false.

Without dwelling upon the moral side of the question, is such a course good business policy? One of the important requisites of a good salesman is the ability to secure the confidence of a customer. In the case in question, is not that confidence in danger of being rudely shaken? For a time all will go well, and a fine list of customers will be happy in the thought that they are buying honey from a man who produces all he sells. But, by and by, some one who knows differently says to one of these customers, "Oh, no, you are mistaken; that man sells the honey he produces, but he also sells a lot that he buys from others". "Well, now, is that so? Why, he told me that all the honey he sold was of his own production". No use to tell him that no such exact form of words was used; it isn't the exact words that he keeps in memory most strongly, but the impression made by those words. A false impression was made—was intended to be made—and being deceived in one respect it is not hard for him to believe that he is deceived in other respects, so, when he is told, "You can't buy any pure honey nowadays—that very honey that you're buying for pure is pretty sure to be half glucose", he replies, "Very likely, for a man that will deceive in one respect will not scruple to deceive in other respects".

The surest way to gain the confidence of a customer is to be entirely candid and truthful, not only in the words that are spoken, but in the way they are spoken, and especially in leaving correct impressions. Words are used to convey ideas and make impressions, and the truth or falsity lies in the impression more than in the words. Let a customer once find that he has been deceived by you in any one thing, and you have forever lost that confidence which gives you your strongest hold.

A Queen that Won't Lay Drone-Eggs.

Arthur C. Miller reports in the American Bee-Keeper the case of a queen which declines to lay eggs in drone-cells, even though the workers seem to urge her thereto. He says:

> As the colony fills three shallow chambers and two supers I looked for signs of swarming, and I also wanted to save the extra queen-cells. There were no external symptoms, and within all was serene. Not a queen-cell or cup to be seen. Each brood-chamber was packed with brood except drone-comb. Such cells the queen had completely avoided, even though in several places she had laid in worker-cells all around the drone-cells. These latter were all varnished and ready for use. Apparently the workers wanted drones, but the queen did not.
>
> The case is interesting. The queen is in her fourth summer at least, and has once been out with a swarm, and yet now when she should be declining, she is keeping the equivalent of 16 Langstroth frames packed with brood and declines to rear drones.

This was June 18, and three weeks later, when the colony swarmed, a careful inspection of the bees as they passed into the hive detected just three drones, which may or may not have come from elsewhere; but not a drone-cell could be found containing brood in any stage, although they were nicely polished, ready for eggs. As the colony of this queen shows exceptional work in the supers, one can hardly quarrel with Mr. Miller for thinking her a good queen, even though of hybrid stock.

Miscellaneous News Items

Mr. N. A. Kluck, of Stephenson Co., Ill., called at this office when on his return trip from the St. Louis convention. Mr. Kluck is president of the Northern Illinois Bee-Keepers' Association, and a good convention-attender.

* * *

The Langstroth Article, on page 677 of last week's number, should have been credited to Gleanings in Bee-Culture, as it was copied from that excellent magazine. We did not discover the omission of credit until after it was printed. We always intend to be very careful in regard to giving proper credit for anything copied in the American Bee Journal from other papers, but once in awhile we are liable to "slip a cog", just like other common mortals.

* * *

Mr. Wm. R. Gould, of Hamilton Co., Ohio, appears on the first page, holding in his right hand a branch on which a swarm of bees settled. For effect, just before the photograph was taken, he caught the two ends of the branch together, thus forming a representation of a horseshoe of live bees. In the back view may be seen a part of his apiary, from which this season he has marketed upwards of 700 pounds of honey from 14 colonies.

Mr. Gould is a recent addition to the list of bee-keepers; also an active member of the Hamilton County Bee-Keepers' Association. The picture was taken by his eldest daughter, Miss Edith.

* * *

Mr. Frank B. White, president of White's Class Advertising Company, of Chicago, and a poultryman of note, has recently been appointed a superintendent of one of the sections of the St. Louis Exposition. Mr. Chas. F. Mills, the chief of the Department of Live Stock, in a letter to us, dated Sept. 28, says:

"The Department of Live Stock is pleased to announce the appointment of Mr. Frank B. White as superintendent of incubators, brooders, mechanical appliances for this purpose, poultry foods, remedies and supplies. Mr. White's years of experience in such matters, and his services in the organization and promotion of the Incubator Manufacturers' Association of America, qualifies him to serve efficiently and acceptably the exhibitors in these lines."

Knowing Mr. White as well as we do, we congratulate the exhibitors in the lines indicated, upon their good fortune in having so able and popular a superintendent.

* * *

Nominations for National Candidates.—In the August bee-papers it was announced that the Board of Directors of the National Bee-Keepers' Association had decided to call for nominations by mail of candidates for the offices to be filled in November, the two highest to be the candidates for each office. General Manager France, in accordance with that arrangement, has sent us for publication the result of the informal ballot, which is as follows:

FOR PRESIDENT—J. U. Harris and C. P. Dadant. Others receiving votes in the order named: Dr. C. C. Miller, George W. York, A. J. Cook, A. I. Root, E. T. Abbott, W. A. Selser, G. M. Doolittle, R. C. Aikin, E. Whitcomb, R. L. Taylor, H. E. Hill, W. Z. Hutchinson.

FOR VICE-PRESIDENT—C. P. Dadant and J. F. McIntyre. Others: Geo. W. Brodbeck, George W. York, Dr. C. C. Miller, G. M. Doolittle, W. L. Coggshall, J. Hall, J. U. Harris, Ernest R. Root, Wm. McEvoy, O. L. Hershiser, J. Johnson, H. Moore, W. H. Laws, W. Z. Hutchinson, H. H. Hyde, R. C. Aikin, F. Greiner, F. Fouch, E. T. Abbott, W. A. Selser, Frank Benton.

FOR SECRETARY—W. Z. Hutchinson and Geo. W. Brodbeck. Others: W. H. Laws, S. A. Niver, L. H. Scholl, E. T. Abbott, G. F. Davidson.

FOR GENERAL MANAGER—N. E. France and L. H. Scholl.

FOR DIRECTOR (to succeed E. Whitcomb)—E. Whitcomb and H. H. Hyde. Others: F. W. Muth, H. E. Hill, J. F. McIntyre, Geo. W. Brodbeck, W. Z. Hutchinson, J. A. Green, J. Heddon, A. J. Cook, E. Pratt, W. Alexander, H.

Mendleson, A. Carmichael, Wm. Stolley, E. Gannson, M. Dearby.

FOR DIRECTOR (to succeed W. Z. Hutchinson)—R. L. Taylor and J. Q. Smith. Others: W. Z. Hutchinson, Geo. W. Brodbeck, F. W. Muth, M. A. Gill, W. L. Coggshall, George W. York, Eugene Secor, C. P. Dadant, H. Surface, J. W. Rouse, E. S. Lovesy, Wm. Cary, J. U. Harris, H. Mendleson, C. Stewart, E. Alexander, F. Rauchfuss.

FOR DIRECTOR (to succeed Udo Toepperwein)—Udo Toepperwein and E. S. Lovesy. Others: Dr. C. C. Miller, H. H. Hyde, J. Q. Smith, E. T. Abbott, F. L. Allen, L. H. Scholl, Ernest R. Root, F. Brown, W. H. Laws, W. Victor, H. S. Ferry, Frank Benton, E. J. Atchley, Gus. Dittmer, H. Lathrop, Emma Wilson, C. Stewart, L. Stachelhausen, E. F. Atwater.

While the two persons receiving the highest number of votes on this informal ballot are to be the candidates, that does not prevent members from voting for any of the others named, or any one else not named, who is a member.

In the case of a successor to W. Z. Hutchinson as director, we understand that he has requested that members vote for R. L. Taylor, who also is from Michigan. Mr. Taylor is an able man in every way, and also a practical bee-keeper, and would be a real addition to the Board of Directors, we think.

* * *

These Missing Volumes and Copies of the American Bee Journal are wanted by the Periodical Division of The Library of Congress, Washington, D. C., in order to complete their files:

Volumes 2 to 5; Vol. 6, No. 1, July, 1870; Vol. 7, Nos. 2 to 11, August, 1871, to May, 1872; Vols. 8 to 13; Vol. 14, 2 to 12, Feb. to Dec., 1878; Vol. 15; Vol. 16, Nos. 1 to 6, 8 to 12, 1880; Vol. 17; Vol. 18, all except No. 46, Nov. 15, 1882; Vols. 18 to 37; Vol. 38, Nos. 1 to 39, January to September, 1898.

If there are any of our readers who have any or all of the foregoing, we trust they will communicate at once with Mr. Herbert Putnam, Librarian, Washington, D. C., as he is very desirous of getting all the missing volumes and copies indicated by the list mentioned above, so that there may be deposited in the National Library a complete set of the volumes of the old American Bee Journal.

* * *

Mr. O. D. Edwards, of Cooper Co., Mo., and a sample of the peculiar work done by his bees, are shown on the first page this week. When sending the photograph, Mr. Edwards wrote as follows:

> I have 26 colonies of bees, and they have been doing very well this year. I had the first swarm June 1, and from this swarm on July 18 I took 24 pounds of fine honey. In taking off honey from one of the old colonies, I found I had some educated bees that manufactured a perfect mitten as well as any artist could do. I enclose a picture showing what it is possible for bees to do. I'll bet it is the only hand that was ever manufactured by bees.
>
> O. D. EDWARDS.

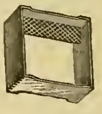
* * *

Mr. O. O. Poppleton, of Dade Co., Fla., called at our office both coming and going to the St. Louis convention. He has also been visiting a few weeks in Iowa. Mr. Poppleton is looking and feeling better now than in years past. He is one of America's best bee-keepers, but on account of poor health hitherto he has not been able to write much for the bee-papers. We hope he will continue to improve, and that with voice and pen he may help for many years to place apiculture on a more sure and enduring foundation.

* * *

Mr. F. W. Hall, of Sioux Co., Iowa, with two of his daughters, and also a neighbor's daughter, made us a short office call last week when on their way home from the St. Louis convention. It's a good thing to take the older children along on such a trip when it can be done. Mr. Hall has set a good example.

Contributed Special Articles



Freaks in Nectar-Secretion—Alfalfa and Cleome.

BY PROF. A. J. COOK.

I HAVE a letter from the veteran bee-keeper of Ventura Co., Calif.—our friend Mr. Cory—which leads me to write something further about growing alfalfa as a honey-plant. Mr. Cory is a man of wide experience, and a very intelligent observer, and his judgment regarding any matters relating to bees, or their economy, will never be disregarded by one who knows him well.

It will be remembered that I spoke of alfalfa very highly as a honey-plant, and called attention to the possibility of added success if bee-keepers would study the matter of location, and by moving their bees secure the nectar from alfalfa, and thus replace a honey dearth with fair if not a bounteous yield.

Mr. Cory criticises this position—in a kindly way, of course, as Mr. Cory is always a gentleman. He says that while alfalfa in certain regions secretes nectar and adds largely to the honey-yield, in other sections, especially near the coast in Ventura County, it seems of no value at all as a honey-plant. This is certainly a very important matter. Since coming to California I have never lived near enough to alfalfa fields—though there is an extensive area of this valued forage-plant within a few miles of Claremont—to form an opinion as to its value from my own personal observation. It is a fact that nearly all our honey-plants seem very erratic in this matter of nectar-secretion. Thus, in our region of Southern California, a little more or less ain makes the whole difference between a wondrous success and an absolute failure in the securing of a honey crop from the sages.

In the East, we use to notice that a season of drouth would utterly cut off the profits of the apiary. It may be true, and very likely is, that atmospheric conditions, as well as soil moisture and make-up, also affect secretion. It seems to me that we need extended observations regarding this whole matter of nectar-secretion. What effect has moisture on the atmosphere or dryness? What is the limit of soil moisture? What is the effect of winds, if any? in fact, the entire relation of environment, both above and below ground, in relation to presence of nectar in the bloom.

It is well known that Colorado, Nevada, New Mexico, Arizona, and the great San Joaquin Valley in California, are regions of great heat, and also that all of them have a very dry atmosphere. In all of these places, if I am rightly informed, alfalfa, when well irrigated, proves an excellent honey-plant. It would seem, then, that a dry atmosphere and warmth are both favorable to honey-secretion. In some parts of Southern California, like Orange County, Los Angeles County, Ventura and Santa Barbara, the weather is much cooler, and the atmosphere much more moist. Now, if, as Mr. Cory says, the alfalfa does not secrete in these regions, though the soil may be as moist and the growth as luxuriant, then we must conclude that either the warmth or the dryness of the atmosphere is the real cause of the presence of the nectar in the blossom.

I think we may safely conclude that the new and famous regions which are becoming deservedly so noted and popular, of Imperial and Coachells, in San Diego and Riverside Counties of California, may safely be counted on as prospectively excellent for honey. They are very like the famous Salt River region of Arizona. The heat is very great, and the dryness of the atmosphere is probably equal to that of any section of our country. Both of these regions, especially Imperial, are certain to become very noted for their growth and extent of alfalfa fields.

If the alfalfa plants of the coast region, with its very cool nights and refreshing fogs, do fail in the secretion of nectar, I doubt if any study or possible change of method would make this plant valuable for bee-pasturage. Surely, the whole matter needs most thorough study and investigation.

CLEOME INTEGRIFOLIA.

I have been interested in reading of this bee-plant in the late bee-papers. It will also be remembered by our older apiarists that, in the 80's, I was very interested in the matter of bee-forage, and was quite sanguine about planting for bees with great profit. At my suggestion, the United States Government arranged for extensive experimentation in the matter. I was appointed to conduct this experiment. After as careful study as I could give, I decided upon extensive planting of this Rocky Mountain bee-plant as likely to give good results as any that I might plant. I also planted several others, especially the famous Chapman's honey-plant. I kept these experiments going for several years. Several acres were used. The experiment was attended with no success whatever, except to prove that planting for honey alone would probably never be successful.

We all know that even the best honey-plants are likely to fail. I knew such failure in Michigan for three successive years. California has given only three good years—at least first-class years—in the last eleven. With these facts in view, we readily see that cultivated plants must have other value to warrant their planting. Thus, while I would discourage any one from planting, especially for honey, I would urge all bee-keepers to work for the planting of ornamental and field and garden crops of such plants as are known as good honey-producers.

The roadside planting of the linden in the East, and of eucalypts in the West, and of the tulip-tree wherever it will thrive, is always to be stoutly recommended. The growth of alfalfa, where it secretes nectar, is so desirable that the bee-keeper would be more than warranted in furnishing the seed if he could thus induce farmers to plant this more extensively in the neighborhood of his apiary.

I have no doubt but that such excellent honey-plants as mignonette in the cities of Chicago and Cincinnati, is what has made apiaries in those cities so profitable.

Los Angeles Co., Calif.

Foote's Machine for Folding Sections.

BY A. F. FOOTE.

THIS is the machine that Foote built. (See first page.)

A—This is the plunger that fastens the sections in the machine that Foote built.

B—This is the lever that forces the plunger that fastens the sections in the machine that Foote built.

C—This is the bow that presses the lever that forces the plunger that fastens the sections in the machine that Foote built.

D—This is the pedal that is fast to the bow that presses the lever that forces the plunger that fastens the sections in the machine that Foote built.

E—This is the (coiled) spring that lifts the pedal that is fast to the bow that presses the lever that forces the plunger that fastens the sections in the machine that Foote built.

At the request of the Editor, made some time since, I send a picture and description of my machine for folding honey-sections. It can hardly be called a "section-folder" because the folding is done with the hands, and the machine fastens the ends.

I place the machine beside my work-bench at my left, and while the left hand is putting a finished section away the right hand picks up another from the brackets on the right-hand side of the machine.

It requires a good deal of practice and quick motions to put up 10 in a minute, but I have done 10 in 59 seconds. The "plunger" plays in grooves on top of the machine next to the operator; the "lever" is between the legs on the front, and does not show well in the picture. The other parts show plainly, and all is explained in the parody on "The House That Jack Built".

The sign hanging by the window is like those I made to be kept in the stores where my honey is sold.

Of course, the merits of the machine can be judged only by seeing it work. In the picture it is like "a painted ship upon a painted ocean", but its work has been pronounced perfect by a good many bee-keepers and others. The machine is perhaps ungainly compared with those advertised in the bee-catalogs, but I made it only for my own use, as I have many other very handy tools that I use about my small apiary.

As shown in the picture, my heel rests on a piece nailed at the proper height to the legs of a stool, and a simple pressure of the toe on the pedal does the rest.

Mitchell Co., Iowa.

A Successful Wintering Repository Above Ground.

BY H. R. BOARDMAN.

REFERRING to my bee-house [see p. 696.—Ed.], it was built 25 years ago; and I have used it for wintering my bees, with entire satisfaction, during all of these years since. It was built in a permanent manner, has been kept well painted, and is in a good state of preservation now.

DETAILS OF CONSTRUCTION.

It is entirely above ground; is 50x12x7 feet high, inside, with double walls 12 inches thick, filled with sawdust, and sawdust on the floor overhead. It is divided into three rooms, two of which were designed to be used in winter for winter repositories for the bees. A room in the middle, between these two, is 10 feet square, inside, leaving the bee-rooms each 19x10 inside. There are two doors in this middle room, front and back. The windows all face the bee-yard on the east; they tip on pivots in the center, to let out the bees, and fasten at the top with spring stops. They are fitted with shutters inside to make the room dark as well as warm for winter. The floor is cement.

The middle room furnishes an indispensable ante-room to the bee-rooms in going in and out during the winter. It also answers an excellent purpose for a ventilating room through which the bee-rooms may be ventilated without admitting the outside air directly to the bees.

For a considerable time after the bees have been put in winter quarters they are not disturbed by the outside air, nor even by the light, if the weather continues moderate, but after a while it becomes necessary to darken the bee-rooms to keep them quiet; and for the same purpose I carefully exclude the direct drafts of outside air.

The room contains a stove used for various purposes, besides furnishing heat and ventilation to the bees in winter when needed. The advantage of two rooms instead of one is apparent in setting out the bees when they have become restless. A part of them can be kept quiet and under control while the rest are put out.

SPECIAL VENTILATORS UNNECESSARY.

When I had my bee-house built I thought that ventilation was the coming solution of the wintering problem. I had two ventilating tubes or pipes, 14 inches square, one in each bee-room, reaching from near the floor inside into the chamber, which I ventilated by a cupola mounted on the center of the house, where the chimney now appears, and connecting with the chamber. This elaborate system of ventilating was all properly controlled by valves and traps, and designed to carry out the vitiated air somewhat as a chimney carries out smoke, so that the bees would keep in a healthy condition. It did not meet my expectation. The draft was the wrong way, and I abandoned the whole scheme as worse than useless, with no little disappointment.

FRESH OUTSIDE AIR TOWARD SPRING NOT DESIRABLE.

I used to open the outside door to admit the fresh, cool air at night to quiet the bees down when they became restless, but I am sure it is a mistake to ventilate in that way. The bees will surely become quiet after admitting the fresh air, and lowering the temperature, but they will not stay quiet. It only increases the impulse to rear brood, just the difficulty that already exists. I have been able to keep the bees in better condition by excluding the outside air until the bees can be set out. I have never been able to maintain a uniform temperature in the bee-rooms, nor have I found it essential to successful wintering. A high temperature I find much safer than a low one, especially after the brood rearing begins at the approach of spring. By a high temperature I do not mean warm enough to drive the bees out of the hives, or permit them to scatter over the room to die.

I have often been able to maintain a temperature of 60 degrees for a considerable time without serious consequences, but not much above that. About 45 degrees has been generally accepted as nearly right for the winter repository. This is well enough for the forepart of the winter, but I prefer nearly 50 degrees, or even a little higher, towards the end of the season. In order to secure this high temperature I must depend upon the warmth generated by the bees.

Experience has enabled me to determine about how many bees it will be safe to place in a room, and be able also to control the rising temperature in the spring.

For the last two winters I have put all of the bees in one room, holding the other two in reserve to supply fresh air, and have it under my control.

Last winter I put 110 strong colonies in one room in this way, almost as many as I would have put in both rooms, if both had been used, and with much better success in controlling the conditions to my liking. I was pleased with the results, and it suggests some valuable improvements in the construction of winter repositories.

BENEFIT OF ARTIFICIAL HEAT.

I have had considerable experience with artificial heat for a good many years, and it has usually been attended with good results. I often build a fire in the stove in the ante-room of the bee-house when the temperature keeps too low. By warming first this room I can so gradually and gently raise the temperature in the bee-rooms that the bees only respond in a low murmur—a sure acknowledgment of their comfort and contentment.

The draft of the stove carries out the vitiated air near the floor, and that without admitting any drafts of fresh air from the outside. Here, then, is the perfect ventilator.

I like to put the bees in before severe cold weather, and in a falling temperature, as they will be more quiet and handle better.

SECURING VENTILATON FOR EACH HIVE.

In the bee-house the hives which are without bottoms are placed six inches apart, and tiered up, each over the open space below. The first row is set on hive-covers arranged in the same way. This gives abundant ventilation, and allows the dead bees to drop out of the hives.

I used to think it necessary, for the welfare of the bees, to set them out for a flight during the winter, but I now prefer to have them remain in until they are set out to stay, which time depends upon the season.

I do think it necessary for the welfare of the bees to set them out of the winter repository for their first flight on a warm, pleasant day. I set each hive on the old stand from which it was taken. My hives are all lettered and numbered to correspond with the stands, which enables me to do this readily. All of the colonies that have been put into winter quarters in normal condition I expect will come out in perfect order, and I am seldom disappointed.—Review.

Huron Co., Ohio.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses. By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

INTRODUCING VIRGIN QUEENS.

How shall we go to work to believe that a virgin three hours old is nearly always and everywhere kindly received (or ignored) as Dr. Miller and others teach us, and yet one such, differing only in that the antennæ were cut off, was promptly balled in two successive colonies, as Dr. Phillips says? It looks like an incongruity. Really, perhaps it is not. The virgin thus mutilated looks to human eye as pretty nearly all right; but, *really*, she is in a semi-moribund condition. Quite possible the bees so perceive and are horrified by it. That a capital wound should cause great action of the nerves and corresponding exhalation of odor is perfectly imaginable. And we may also wonder how much the smell of fingers and tools comes in here. Page 611.

LARGE BEE-KEEPERS' ASSOCIATIONS.

C. P. Dadant treats us to a clap of thunder (small one) when he tells us we have the largest membership of any bee-association in the world. I had supposed there were in Europe many larger ones, among them some equal to ours multiplied by a considerable figure. Well, in my boyhood, boys used to say, "Now, you see what thought did". Page 612.—[We also think Mr. Dadant is mistaken in his statement. We believe there is an association in Europe having a membership of some 8000 bee-keepers.—Editor.]

PROPER TEMPERATURE FOR BROOD-REARING.

So, according to Mr. Doolittle (which is a pretty reliable "according to"), bees do not let the heat go below 92 degrees inside the cluster where they are rearing young. Also, in very warm weather, they do not let it go above 98 degrees. How shall we memorize that? 92! 98! In this case I guess square effort to fix 92 and 98 in the memory will prosper better than any mnemonic trick we are likely to discover. Page 613.

HONEY-COOKIES FOR ALL.

Miss Wilson's cooky figures are very inspiring, indeed. After being so very generous as to allow ten persons to the average family, she points out a market for 96,000,000 pounds of honey each year, by merely supplying everybody (very moderately) with honey-cookies. Two thousand carloads! Quite ready for this advance are full half of our population, to-wit, the boys and girls. I'm sure the men-folks can't hold out long if you'll only contrive to make them smell a panful of the cookies when they are warm. Nothing appears to be obdurate unless the sisters—*Wonder if the eating of honey-cookies is not good for the complexion.* Now! All together! Great is the honey-cooky! Banzai! Page 615.

FREEDOM FROM BRACE COMBS AND BURR-COMBS.

T. F. Bingham's idea of having all the honey stored inside the frames, and inside the sections, is self-evident good sense. If he has succeeded in living up to his ideal freedom from brace-combs and burr-combs for five years, quite likely some of the brethren may wish to refresh their memories as to how it was done. Oft happens that just when we have got ready to follow suit we've forgotten how. Page 619.

THE RIGHT KIND OF A "WINTER".

I. V. Winter is not "the winter of our discontent", 'cause he finds the bees and the American Bee Journal both interesting, even in times of no honey. Page 621.

LONGEST CELLAR CONFINEMENT OF BEES.

Only four months of the year in which they were wholly out of the cellar! That same is the case of that cap-sheaf, long-confined colony of bees which was overlooked and left in the cellar till June 19. Here's 208 days instead of the 100 originally challenged for. Take your ticket, Mr. Lincoln—till somebody else forgets one till June 20. Page 620.

"The Hum of the Bees in the Apple-Tree Bloom" is the name of the finest bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us *one new* yearly subscription to the American Bee Journal at $1.00.

Sketches of Beedomites

HARRY CLINTON MOREHOUSE.

Some weeks ago we announced the rather sudden death of H. C. Morehouse, of Colorado, the very efficient secretary of the Colorado Bee-Keepers' Association. We also promised to give later a biographical sketch, which we will do now, taking it from Gleanings in Bee-Culture, which contemporary also has kindly loaned us the engraving appearing on the first page :

On Sunday morning, July 24, at 3 : 30, occurred the death of Mr. Harry Clinton Morehouse, at his home in Boulder, Colo., after an illness of but eight days, from appendicitis. At no period during his brief illness was it suspected by those in attendance that the cause was other than stomach trouble, which, seemingly, yielded to the treatment administered. On Thursday a period of convalescence came on which continued for two days, when, suddenly, a change came, and the victim rapidly sank to his last sleep. An autopsy, held under proper authority, disclosed the exact cause to be a cancerous formation growing about the lower abdomen, and immediate cause appendicitis.

Mr. Morehouse was born in Marengo, Morrow Co., Ohio, April 15, 1869. In 1893 he, with his father, Thomas H., and mother, Mary V. Morehouse, together with a grandfather and brother, removed from Ohio to Guthrie, Okla. There the young man apprenticed in the printing trade, and later became a junior partner of the writer. In 1897 he accompanied the writer to Boulder to establish here the Colorado Representative. This being successfully accomplished, and having early acquired marked skill in the handling of bees, he sold to its founder his interest in the printing-plant, and invested the same with other capital in an apiary in 1900. About this time he was married to Miss Mary Niles, of Boulder. In 1901 he established the Rocky Mountain Bee Journal, and conducted the same with great success and recognized ability by reason of his keen scientific insight into the subjects treated. Rapidly did his business increase till this time, when he had under his control by far the largest number of colonies of bees of probably any one in the State.

In March last he sold his journal to a California party, and has since confined his efforts to his apiary and to the duties devolving upon him as secretary of the Colorado State Bee-Keepers' Association.

Since coming to Boulder an accident caused the death of his younger brother. Two years ago his father died ; a few weeks later an aunt was taken while a near neighbor, and now he has answered the sudden call, leaving an aged mother alone in the world, save a bereaved young wife with a little son 16 months old.

Mr. Morehouse acquired more than ordinary success in his chosen vocation. He was a man of marked characteristics, and one whose manner at once impressed all with his earnestness, candor, skill, and honesty. He stood high in the business and fraternal circles of Boulder ; and in the State Association none were more strongly recognized in their profession.

The funeral was held on Tuesday, July 26. Quite a large delegation of members of the State Association from over the county were in attendance, and the floral tributes were indeed lavish and most beautiful, signifying in a measure the high regard in which the stricken brother was held.

LEO VINCENT.

In a private letter to this office from Mrs. Morehouse, dated Sept. 1904, she says :

"I have had to look after the harvesting of honey from 600 or more colonies of bees, and consequently have had quite a responsibility, which, sometimes, would seem as though I could not shoulder ; but thanks to good friends I have been helped to succeed very well."

BEE-WINTERING HOUSE AND APIARY OF H. R. BOARDMAN, OF HURON CO., OHIO.— See page [illegible]

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Bee-Smoker With a Weak Spring.

A smoker forms a very important part of a bee-keeper's outfit. It is one of the very first things he buys after getting his bees. It is in almost constant use when at work in the apiary. So it is a matter of no small importance in deciding as to which smoker to get. In any case it ought to be one that can be used with the least labor possible.

Personally, I like a smoker with a very weak spring, so weak that perhaps most people would not like it at all! and for that reason I have held on to the same smoker year after year, although it is a most disreputable looking affair, coated with bee-glue, and smells a good deal like an old pipe that has been used many a long day. So you see it is not for its beauty that I have such an affection for it, but for the good that it has done, and can still do, for many an arm-ache has that same smoker saved me.

If you have never tried using one with a very weak spring, just try one and then try one with a strong spring, and note the difference. When one spends almost the entire time in the apiary, and uses a smoker so much of the time, I believe that most of the sisters will agree with me that a weak spring will be a very important factor in the saving of fatigue in a heavy day's work.

What is a spring for? Just to throw the bellows open, and to have enough force remaining to resist the pressure of the fingers so that the bellows will not slip out of the hand. Now, if the spring is strong enough so that it requires just a pound more force than is needed for this, you will readily see that there is just so much strength wasted.

Some people that have tried my smoker, not being used to such a weak spring, wonder why it does not slip out of my fingers; but it never bothers me in the least in that way, neither do I think it would them if they were actually to use it; but they are so used to the stiff spring that they imagine it would.

If you order a smoker without specifying, you'll get one that will make you lame after a day's work; but insist upon a *very light* spring, and perhaps you may get it.

* * *

Bee-Keeping for Women in Newspapers.

The experienced bee-keeper is always on the alert to learn something new, eager for information from any source, but there is one sort of literature that he always reads with interest without any expectation of gaining information. It is that obtained from the daily papers, and to a greater or less extent from the agricultural papers. Some of it would fit well in a comic almanac; and the bee-keeper reads it with the expectation of being amused at the absurd things written—generally without being disappointed.

Some writer for a daily thinks it would be an interesting thing to write about bees, and he—perhaps oftener she—concludes it is best to be fully informed on the subject, so she goes directly to the scene of action, visits the apiary of a successful bee-keeper, asks questions which are cheerfully answered, and after that half day's visit has obtained the sum of all wisdom about bees, and is ready to tell the dear public all about it.

An instance is to hand in a late Chicago daily. It is written by Cora Roche Howland, who may be a very estimable lady, but it would be well for her to learn that before any writer attacks the subject of bee-keeping, she needs not only a day, but many days, of observation and study to make sure that none of her statements may be classed among the ridiculous.

The article is headed, "Bee-Keeping Best Suited to Women". That heading may have been part and parcel of the article, or it may have been conceived by the editor of the daily. In either case, the ground for it seems to be in the following paragraph:

> "In the nature of things, bee-keeping is woman's work. In the hive the womenfolk are the whole thing. Upon the health of the queen-bee the prosperity of the colony depends. The working bees, according to the naturalist, are undeveloped females. The queen's fat and lazy consort lives merely to die for his queen, and all his brother drones, the unsuccessful suitors, are tolerated by her faithful subjects only so long as they are needed, and then are pierced to death by the poisoned javelins of a horde of angry amazons."

That's original, to say the least, for whatever reasons have been given as to bee-keeping being suited to women, it has not before been urged that bee-keeping was especially a female business because worker-bees were females. By the same reasoning the dairy business, including milking and feeding the cattle, should be turned over to women, because cows are of the female persuasion.

But how about the drones being "pierced to death by the poisoned javelins of a horde of angry amazons"? Farther on the writer says, "At a given signal they die, massacred by the virgin workers". What is that signal? and who gives it? And if there is such a general massacre, who has seen it? Did any one ever see workers by the dozen stinging the drones, or did they merely see a few workers driving the drones and making feints at stinging?

> "At swarming time occasionally a swarm hangs so high on a tree that she has to mount a ladder to reach it. But the task is an interesting one. Grasping the bough from which the swarm depends, she shakes the bees down into an inverted hive. If they do not go readily she pushes them with her hands or with a big ladle. There is small likelihood of stings, for the bees are full of honey and good natured. They will follow their queen submissively."

Did any of you sisters ever mount a ladder and shake a swarm into a hive turned upside down? And did the bees go right down into that inverted hive? and did the queen go down first and all the rest "follow their queen submissively"?

Just one more interesting item:

> "The intelligence with which a bee accommodates itself to circumstances certainly seems human. If you interrupt her in her work by contracting her hive, she will contract the size of her cells."

So if you want cells of a little smaller size, all you have to do is to give a little less room.

There are some nice people among newspaper writers, but they should learn that one can't cram in a day so as to write intelligently about the little busy bee.

Bicycles for Out-Apiaries.

Replying to the charge that when a man has gone to an out-apiary on a bicycle, he has already done a day's work before reaching the apiary, Editor Root, in Gleanings in Bee-Culture, thus comes to the defense of the bicycle:

> This is not according to my experience, and I therefore judge that the correspondent in question had never ridden a bicycle enough to toughen his muscles to the point where riding is a real pleasure rather than a wearisome exertion. I have ridden repeatedly to our out-yards on a bicycle, and have done a good day's work on arriving at the yard. I have sometimes been very tired from working in the yard, feeling as if I could not drag my feet around any more, when, presto! as I got on my machine a new set of muscles were brought into play in a *different way;* and on arriving home it is an actual fact that I felt refreshed and rested. Why don't I go to out-yards now on a bicycle? Because the automobile is quicker, and enables me at the same time to carry along extra stuff.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get them subscriptions, for which we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.

Ask Doctor Miller ??

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Perhaps Laying Workers—Separators No Hindrance.

1. Mr. C. H. Fry, an old veteran at the "stinging sweetness", relates a peculiar circumstance: Queen-excluder under extracting chamber. Queen-cell found on extracting-frame. Do bees transport the larvæ? Did the queen go through the excluder? No other larvæ found.

2. Another circumstance or query: More honey he claims will be stored where no fences are used in this section of the country. He claims a wager that a vast amount more honey can be stored without, as the warmth can be concentrated by the bees and kept for their use when needed. What do you say? Ohio.

Answers.—1. It might be the work of a laying worker.
2. It is generally believed that separators of any kind make no appreciable difference in the crop.

◆

When to Clip Queens.

When is the proper time to clip queens? Arkansas.

Answer.—First time you happen to see them after they begin to lay. Then each spring, after bees begin gathering, look through all colonies for queens that need clipping.

◆

Long-Tongued Leather Colored Bees.

I have some bees called the long-tongued leather-colored bees. Are they Italians? If so, where did they get that name? Arkansas.

Answer.—Very likely Italians; so-called because brought from Italy.

◆

Robber-Fly or Bee-Killer.

I am sending you a little box containing a bee and a bee-hawk. Please tell me through the American Bee Journal what it is. Kansas.

Answer.—It is a two-winged robber-fly. I don't know enough to say whether it is Asilus missouriensis or one of its near relatives, but coming from Kansas it may be the Nebraska bee-killer, Promachus bastardi.

◆

Producing Comb Honey—Tupelo-Gum.

How do you produce comb honey? Take up the hive in the spring, and describe operations till the season closes.

1. Say whether or not you use more than one super, and, if you do, and could take off the unfinished sections every 10 days, would you use only one super?

2. When you use more than one super do you let all sections stay on till the season closes?

3. Do you think as much honey would be produced with one super to the hive, and take honey (the finished) every 10 days? I want your plan, please.

4. What is the value of "tupelo-gum" as a honey-tree?

5. What do you think of two extracting supers for a brood-chamber? and when you put supers for comb honey on alternate the supers, placing the bottom one—which would have the most brood in it—next to the sections? There would be freer communication because of no honey at top of frames. Mississippi.

Answers.—Your question reminds me a little of a letter I once got from a woman in Wisconsin, saying, "Please give me your system of bee-keeping". If I had asked her, "Please give me your system of housekeeping", she might have realized what she was asking. Exactly what you ask I have already tried to answer in the book, "Forty Years Among the Bees", and there would hardly be room for all that in this department. To your specific questions I am glad to make answer:

1. I don't think any experienced bee-keeper would be willing to confine himself to one super, although some advocate not more than two at a time.

2. No.

3. No. I think I would be a heavy loser if I should limit myself to two, and sometimes four or more are none too many.

4. That tree is not found here, and I don't recall seeing its value given.

5. It would work all right, but might be no gain.

◆

The "Bidsom" Bee-Feeder.

What is the advantage of the feeder described on page 588 over the Miller feeder? Illinois.

Answer.—I don't know; but I think the special advantage claimed is that which is mentioned in two places: First, where Mr. Boughter says, "the entire arrangement is made bee-tight all around, allowing examination or refilling without disturbing the bees at all"; second, where he says, "and you have a *sine qua non* 'Bidsom feeder', in which the bees can get at the feed, but not at you while looking after their feeding". From this I suspect that Mr. Boughter has the mistaken impression that the Miller feeder can not be opened and filled without exposing the bees. Possibly, however, there may be something I do not fully understand in the case, and will be glad to have Mr. Boughter tell us wherein the improvement lies.

◆

St. Louis Convention Delays Answers.

Attending that St. Louis convention and looking around a little at the big show has delayed no little replies to some questions, and I ask the indulgence of the questioners. I'll try to answer your next questions very promptly, and I'll promise not to go to St. Louis for the next five years. C. C. Miller.

The Quality of Glucose.

Bee-keepers who object to having glucose sold as honey, or as something better than honey, are sometimes silenced by being told that chemists pronounce glucose entirely wholesome. So it is; but that's pure glucose that the chemists are talking about, and pure glucose isn't sold for 10 cents a pound. W. K. Morrison says in Gleanings:

> Good glucose, free from all impurities, and fit for table purposes, is quoted at 50 cents per pound in the catalog of the second largest dealer in the world. The glucose we hear so much about is *artificial* glucose—quite a different thing altogether. It is a disagreeable compound, which no one who values his life would eat knowingly. I am not exaggerating at all when I write thus. Five years ago, in Manchester, England, a number of persons lost their lives by drinking beer containing only minute quantities of this same glucose. Now, what would be the result of using it in large quantities, as would be the case in using it as a substitute for honey? In the case of the beer the glucose was converted into caramel, and then used to give "body" to the beer. In the particular case I refer to, at least 30 persons lost their lives in a few weeks by this insidious poison. It was by the merest chance the discovery was made that the poison came from the beer. And this is the principal use to which artificial glucose is put. So beer-drinkers and would-be honey-mixers can take fair warning.

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Reports and Experiences

Best Fall Honey-Flow.

The early summer was not very favorable for the bees in this locality, but this fall is the best we have ever had. We will get 1500 or 1600 pounds of honey, about 1200 pounds of which will be extracted, from 21 colonies, spring count. There is not much sale for honey here. HARVEY R. CHINN.

Dixon Co., Nebr., Sept. 21.

One of the Asters.

Kindly name the enclosed flower. There is an abundance of it this season now in full bloom. The bees are working on it more vigorously than they have on white clover or any other bloom. Does it make good honey? and of what color?

This is my first season with the bees, and they have done very well.

GEO. E. WILKINS.

Wright Co., Mo., Sept. 23.

[The flower is one of the asters—*Aster ericoides*—and is an excellent honey-producing plant. Nearly all the asters and goldenrods furnish first-quality nectar for the bees, and where these plants are abundant the apiarist need have no fear of empty or half-filled supers.—C. L. WALTON.]

The Value of Honey-Leaflets.

I took several of the leaflets, "Facts About Honey and Bees", to town and distributed them, and the result was that the next time I went in the merchant wanted me to bring in more extracted and comb honey. Extracted honey is going fast in 8-ounce tumblers for 10 cents, and this clears for me 14 cents per pound cash. I have a large stock of tumblers filled and ready for the market, and ordered another barrel yesterday. I shall work more for extracted honey in the future, as comb honey brings only 12½ cents per pound. People will buy a great deal more honey if they can buy it in 10-cent packages. Some will buy a glass of honey when they come to town, just to try it, and they like it so well that each time they come they will get a glass or two.

A grain-buyer—a young, well-educated man—came to me the other day, asking for another leaflet, as some one had taken his. He wanted Dr. Miller to read it (we have a Dr. Miller here, too). He said it was wonderful. I also gave one to another doctor here, who was at one time demonstrator of Bacteriology in Rushville Medical College, and he liked it very much. I gave a copy to the editor of our local paper, and asked him to republish it if he thought it worthy.

When reading one of these leaflets one is tempted to think that it is not all the truth; in fact, the account

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best territory in this country
for the growing of early strawberries and early vegetables. Every dealer in such products should address a postal card to the undersigned at DUBUQUE, IOWA, requesting a copy of "Circular No. 12."
J. F. MERRY, Asst. Gen'l Pass'r Agent.
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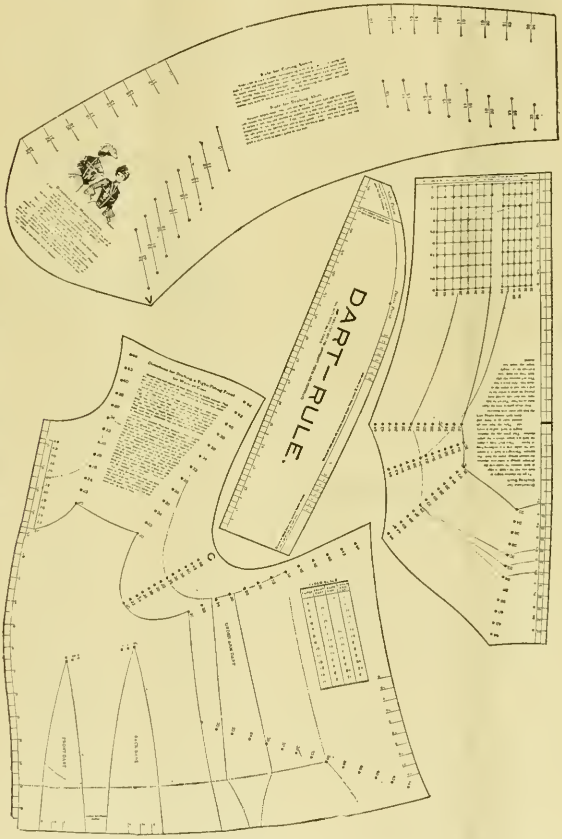
Something FOR OUR Bee-Keeping Sisters in the Winter Time.

We think all ladies will agree with us in saying that every man should at least understand some business, with which, in case of necessity, he could support himself and family. The wealthiest people frequently come to want, and wretched, indeed, is the man who cannot earn a living after his wealth is gone. He sometimes fills the grave of a suicide. And why, in this enlightened age of progression, should not woman, as well as man, be able to depend on her own resources? In case her husband dies in poverty, must she starve or depend on charity? In case her husband fails to provide and grossly mistreats the woman he has sworn to cherish, must she humbly submit? **A THOUSAND TIMES, NO!** Let every woman, before she marries, have some knowledge that can be used to make her a living. Every mother, rich or poor, should make her daughters, in a certain degree, independent, by giving them some kind of a trade, and teaching them to be self-reliant. Mothers should have their daughters learn to sew, and not neglect this important part of their domestic education. The daughter so taught will not only make a better wife and mother, but will also be more likely to secure a better husband, and will always command his respect. He will not look upon her as a helpless "know-nothing," but will know that if he fails in his duties, she can live without him, and this can only strengthen the bond between them. A thorough knowledge of dressmaking can always be turned into gold, and become the means of support for the mother and her little ones. She may never have to use this knowledge in this way, but she has a trade and can use it if necessary.



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seems a little fanatical, but I challenge any one to give substantial evidence to prove a single part of it false. Since it is true the world ought to know it, and if the majority learn of it the result will be a great help to the bee-keeping industry. J. E. JOHNSON.

Knox Co., Ill., Sept. 6.

[We furnish the leaflets referred to for 35 cents per 100, postpaid.—ED.]

Good Bee-Brush—Foul-Brood Cure.

The best bee-brush, I think, is a turkey wing, or the wing of a wild or tame goose.

The best way to cure foul brood is to give the bees new, full combs of honey after breeding is over in the fall, taking away all of the combs.

A. J. SNOWDEN.

Buffalo Co., Nebr.

Moving Bees on Wagon and Cars.

I will report my experience in moving bees on a wagon and on cars for the benefit of others.

I prepared the bees for shipment by screening them with wire-cloth on top of the brood-frames, and closing the hive-entrances with a strip of board for heavy colonies, and for the very light colonies I nailed the covers on and screened the front entrances. A few of the heavy colonies had considerable honey in the brood-frames; these cracked, and hung on the wire in the frames, while a few fell off to the bottom of the hive. The bees loaded themselves with honey, and then were so heavy they shook to the bottom of the hive with the shake of the cars, became daubed with the honey leaking from the broken combs, and died; while those having little honey in the hives came through in excellent condition. If I had extracted the honey before moving they would have moved without any loss.

The crop of honey is about half, or less than half, what it was last year.

GEO. E. MOORE.

Washington Co., Wis., Oct. 4.

Bee-Keeping in West Virginia.

I believe this locality is above the average for bee-keeping. We have a great amount of basswood and poplar on the sides of our rugged hills, which is not likely to be destroyed, as the ground can never be cultivated or made useful where they stand, and the timber left is only culls. They seldom fail to produce a great honey harvest for the bees, and our fields always have more or less of white clover. Of late years our fall flow of honey has been immense, almost altogether from aster, which, in many places, is crowding out all other vegetation, and at this writing many spots covering acres are snowy white with its bloom, so our bees will go into winter quarters with combs filled with honey from this plant. It continues to bloom until killed entirely by freezing.

I have 37 colonies all in fine condition. I got but little surplus this season; it was the poorest season for years, caused by almost continuous cold and wet weather during May and June, and bees came out in bad shape after their long winter confinement. I am going to put all my colonies into the cellar this winter. I had never tried wintering bees in the cellar until last winter. I had 3 colonies which were afterswarms, and those did not have 10 pounds of honey to winter on, yet those colonies came through the winter without the noticeable loss of any bees, while strong colonies, being wintered on the summer stands, were either frozen to death or so depopulated as not to be able to give any surplus.

I am getting about all my education along this line from the American Bee Journal, and think the bee-keeper that doesn't read it is the loser.

JAMES WOLFE.

Marshall Co., W. Va., Oct 2

Likes Italians Best.

I use a 10-frame hive, taking a frame 12x12 inches, and super frames 12x9. My bees are all the way from golden Italians to blacks. I like the Italians the best on account of their beauty, and their gentleness when I lift the frames from the hives.

F. B. STILWELL.

Tazewell Co., Va.

A Lively Time Moving Bees.

In May, 1903, I started out to buy a few colonies of bees. Several miles from home, on the bluffs of the Sangamon River, I found a widow who had 8 colonies which she was willing to sell. The bees were all in 8-frame dovetailed hives except one, and that one was in an old hollow log set up on end, about 32 inches across the top, and larger at the bottom. It was arranged so that a super could be placed on top, and it had a hive-cover on it. I examined all the colonies, and agreed to give her $21 for the 8 colonies, 21 empty hives, 36 supers, and 500 new sections.

Upon examining the log hive I found it chock-full of bees—these little black smarties—and the log stood 3½ feet high, with an auger-hole bored 7 inches from the bottom, also a few notches. But it seemed that the bees could creep out anywhere around the bottom of the log. I told the widow I would be after them the next evening.

The next day I looked around for a team. I found a man whom I will call John, with a two-horse team. We started in time to get over there at sundown, with a lumber wagon and a terrible rough road to travel. We fixed all the frame hives with wire-screen. We had no room for the log hive, so we struck for home. I don't think bees ever got such a shaking up as they did. We got them unloaded just at daylight.

The next evening we went after the old log, reaching there just at sundown. As soon as it got a little dark we went to work. I had a wire screen for the top and one for the bottom. We got the screen on the top all right, but when we went to put the screen on the bottom I found I had used the wrong screen for the top, and the other one would not cover the bottom. So I took the screen off to put on the right one, and the bees got mad, and still madder, and went for us in full force. I told John to stick to them, and if it got too hot to run. I soon found that run was the only thing to do; but we got the screen off the top while it was

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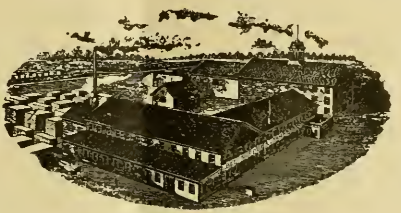

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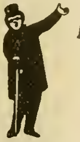

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was so great in July and August that he was compelled to withdraw his "ad." from the American Bee Journal. to keep from being overrun with orders; but he is now UP WITH ORDERS, and sending Queens BY RETURN MAIL, bred from his FAMOUS LONG-TONGUED RED-CLOVER STOCK, which has won a world-wide reputation for honey-gathering, hardiness, and gentleness. This is the same stock which W. Z. Hutchinson advertised for several years under the name of "SUPERIOR STOCK."

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a hot time. We agreed to evacuate, and come another day, so we loaded up the old boxes and went home, feeling badly whipped.

In a few days I got a card from the widow, to come and take those bees away, as they were stinging the children and the chickens, and everything they could get at. I did not know what to do. Finally I made up my mind to take those bees, dead or alive. I took sulphur with me, to kill them if they showed fight.

We got there just at sunrise. They were out and ready for us. I put on my new veil, and went for them with volumes of smoke, but it had no effect on them. The more I smoked the more they came out. We had to retreat, just covered with bees. They were in my pockets, and everywhere. We let them settle, then I packed dirt around the bottom to keep them in. At last I got the top screen tacked on, but they kept working out through the dirt at the bottom.

I happened to think of my package of smoking tobacco. I filled the smoker, got it to going, and stuck the nozzle in the auger-hole. It was not long before they put up a terrible howl. I did punish them good. They quit howling, and everything was quiet. I told John I believed I had killed them all, but he said he didn't think so, that they had only surrendered.

I turned the log down to tack on the screen, and about a peck of bees dropped down. I tacked the wire partly on, scraped up the drunken bees, and dumped them in and closed it in a hurry. We put them into the wagon, and had not gone a mile before they were as lively as ever. Poor John was swelled up like a toad. This spring the moth or wax-worm got into the hive, and did a better job than I did.

This is a longer letter than I expected to write, but I hope the editor will not call me down. It is like a Methodist experience—the half will never be told. S. T. CRIM.

Sangamon Co., Ill., Aug. 20.

Bee-Keeping in Northwestern New Mexico.

This is an off-year for Northwestern New Mexico, but not a failure. Spring rains failed to materialize, and, as a result, our bees were starving when our eastern friends had their crop gathered.

Last year was an exceptional one, and our bees were not without a flight for more than a week at any one time during the winter. They were in fine condition in the spring, but the harvest was too long delayed for many. Those who were near large fruit farms were more fortunate, and ready for business when the harvest did begin. Sweet clover was fine, but has seen its best days. Two crops of alfalfa have been harvested, and the prospects are that the third will mature before frost.

Bees are now humming over the Rocky Mountain bee-plant (cleome), but the area this year is limited to the low bottom-land. "Rabbit brush" (doubtless a kind of sage) is in full bloom, but bees don't pay much attention to it now. It produces dark honey.

Nearly every ranchman here is a bee-keeper. There are few professionals. This is certainly the home of the honey-bee, but the obstacles bal-

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Forty Years Among the Bees, by Dr. C. C. Miller.—This book contains 328 pages, is bound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with 112 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard. The first few pages are devoted to an interesting biographical sketch of Dr. Miller, telling how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters, and shows in minutest detail just how Dr. Miller does things with bees. Price, $1.00.

Bee-Keeper's Guide, or Manual of the Apiary, by Prof. A. J. Cook, of Pomona College, California. This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 544 pages. 295 illustrations. Bound in cloth. 19th thousand. Price, $1.20.

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A B C of Bee-Culture, by A. I. & E. R. Root. — A cyclopedia of over 500 pages, describing everything pertaining to the care of the honey-bees. Contains about 400 engravings. It was written especially for beginners. Bound in cloth. Price, $1.20

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Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—It is nicely illustrated, contains 160 pages. Price, in cloth, 75 cents; in paper, 50 cents.

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Bienen-Kultur, by Thomas G. Newman. —This is a German translation of the principal portion of the book called "Bees and Honey." 100-page pamphlet. Price, 25 cents.

Apiary Register, by Thomas G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 50 colonies, $1.00.

Dr. Howard's Book on Foul Brood. —Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cents.

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Foul Brood Treatment, by Prof. F. R. Cheshire.—Its Cause and Prevention. 10 cts.

Foul Brood, by A. R. Kohnke.—Origin, Development and Cure. Price, 10 cents.

ance the advantages. An old bee-man declared the bee-moth could not be found here. We saw one light case last year, but combs left in empty hives all this summer are untouched. Foul brood is reported at Farmington, 17 miles down the river.

An almost prohibitive freight rate, and being 50 miles from a railroad station, make home-made hives almost imperative. With fine comb honey at 7 cents wholesale, and 10 cents for one section, or three for 25 cents, at retail (last year), after a 50-mile haul by wagon, the present is rather discouraging to a professional. The future outlook is better. A railroad, which means cheaper rates and new markets, is practically assured. The mining towns could be worked to advantage. Extracted is in better demand, and sells as high, or higher, than comb. New irrigating canals are contemplated, and that will add many thousand acres of alfalfa and fruit-land to our pasture area. As a whole, the future prospects of San Juan Co., New Mexico, as a land for the bee-keeper, are very bright. W. A. BALLINGER.

San Juan Co., New Mexico, Aug. 18.

CONVENTION NOTICE.

Wisconsin.—The convention of the N. E. Wisconsin Bee-Keepers' Association, to be held in the Opera House at Mishicot, Oct. 25, 1904, will be called to order at 10 a.m. Election of officers and other important business will be transacted in addition to the program recently published in this journal. DR. J. B. RICK, Sec.

Mishicott, Wis.

Texas.—The Southwest Texas Bee-Keepers' Association meets in San Antonio, Thursday and Friday, Oct. 27th and 28th. This will be a rousing and important meeting, and all bee-keepers are cordially invited to attend. For program and place of meeting address,

H. H. HYDE, Pres.,
129 N. Flores St., San Antonio, Tex.

Georgia.—The bee-keepers of Georgia will meet Oct. 21st. at 10 a.m., at 20½ Cotton Ave., Macon, Ga., during the State Fair, to organize a bee-keepers' association. Every bee-keeper or other person interested is invited to be present.

Cordele, Ga. J. J. WILDER.

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Honey and Beeswax

CHICAGO, Sept. 24.—The market is now showing more activity. Some small lots of fancy white clover have been sold at 14c per pound, with No. 1 ranging at 12@13c; very little call for other grades. Extracted, white, brings 6@7c; amber, 5@6c, according to quality, flavor and style of package. Beeswax, 28@30c.

R. A. BURNETT & CO.

KANSAS CITY, Sept. 22.—Market on comb honey is quite active at $2.75 per case for fancy white stock. Extracted rather slow at 6½@7c. We look for the demand on extracted to pick up considerably with cooler weather, Beeswax in good demand at 30c per pound.

C. C. CLEMONS & CO

BOSTON, Sept. 22.—Comb honey continues to come in slowly, while the demand is increasing. Fancy white will bring from 16@17c; No. 1, 15@16c, and No. 2, 14c. The old honey has been practically cleaned up, there being one lot of any quantity left. We look to see our present market maintained right through the season. BLAKE, SCOTT & LEE.

NEW YORK, Sept. 24.—Comb honey is now arriving quite freely and fancy stock finds ready sale at 15c; No.1 at 13@14c; No. 2, 11@12c; no buckwheat on the market as yet. Extracted honey in fair demand at unchanged prices. Beeswax dull at 27@28c.

HILDRETH & SEGELKEN.

CINCINNATI, Sept. 15.—There is an improvement in the honey market, so far as extracted honey is concerned. The demand has increased considerably, but the supply is limited, owing to the fact that bee-keepers in general are mistakably holding their crop for better prices. We quote amber extracted in barrels at 5½@6c: white clover in barrels and cans at 7@8½c, according to quality. The comb honey situation is badly demoralized, being aught but encouraging. Quote fancy white clover comb honey at 14@15c. Beeswax, 26@28c.

THE FRED W. MUTH CO.

ALBANY, N. Y., Sept. 28.—Our honey market is getting more brisk now. The quality of honey seems to be much ahead of last year. We are selling fancy white comb at 15@16c; A No. 1, 15c; No. 1, 14@14½c; mixed, 12@13c; buckwheat, No. 1, 13½@14c; No. 2, 11@12c. Beeswax. 28@30c.

H. R. WRIGHT.

CINCINNATI, O., Sept. 21.—Comb honey is now coming in more freely, and prices if anything have a little moderated. The sales made and prices obtained were for No. 1 fancy water-white comb. 13½@15½c; No. 2, 12½@14c. Extracted is sold as follows: White clover, 6½@8c; amber in barrels, 5¼@5½c; in cans, 6@6½c. Beeswax, 27c. C. H. W. WEBER.

PHILADELPHIA, Sept. 22.—The market for comb honey is very much unsettled at the present time. Quite a few poor lots have been sent in early, and have sold for low prices. Very little fancy has arrived in this market thus far. We quote: Fancy, 16@17c; No. 1, 14@15c; amber, 14c. Extracted, fancy white, 8@9c; amber, 7@8c; dark, 6c. Beeswax. 28c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

SAN FRANCISCO, Sept. 21.—White comb, 1-lb. sections, 12½@13c; amber, 9@11c. Extracted, white, 6@6½ cents; light amber, 5@6c; amber, 4@4½c; dark amber, 3¼@3¾c. Beeswax, good to choice, light, 29@30c; dark, 27@28c.

Spot stocks are of rather light volume and are mostly of amber grade. There is little selling pressure, especially on good to choice honey. Some holders are contending for stiffer figures than are warranted as regular quotations. Not much is changing hands, and business doing is principally on local account.

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Fancy Comb Honey from White Clover,
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27th Year **Dadant's Foundation** 27th Year

We Guarantee Satisfaction. What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS. PATENT WEED-PROCESS SHEETING.

Why does it sell so well? Because it has always given better satisfaction than any other. Because in 26 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies

OF ALL KINDS.

Langstroth on the Honey-Bee—Revised
The classic in Bee-Culture—Price, $1.20, by mail.

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DADANT & SON, Hamilton, Hancock Co., Ill.

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And you never shall be missed."

If we haven't, send us your name now so as to be sure to receive our new 1905 catalog, when issued, even if you don't want any goods. It will pay you to have it. IT WILL BE A DANDY.

The following cash discounts will be allowed on orders for Supplies for next season. This does not include honey-packages for current use.

6 " " " Nov. 1.
5 " " " Dec. 1.
4 percent if sent in before Jan. 1.
3 " " " Feb. 1.
2 " " " Mar. 1.
1 percent if sent in before Apr. 1.

Our 1905 CATALOG PRICES
will be the same as 1904

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BEEWARE
WATERTOWN LEWIS U.S.A.
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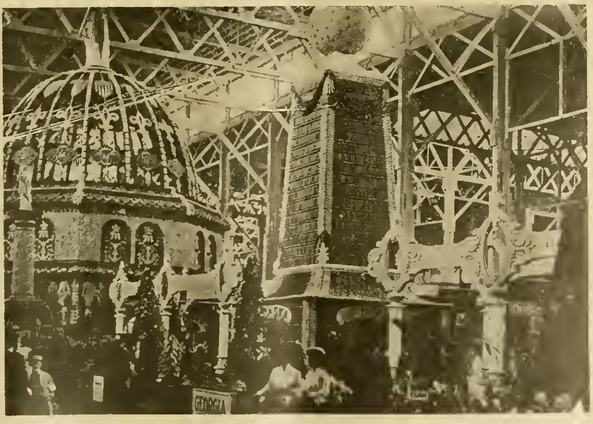
American Bee Journal

44th Year. CHICAGO, ILL., OCT. 20, 1904. No. 42.

AGRICULTURAL BUILDING AT THE WORLD'S FAIR, ST. LOUIS.



VIEW IN THE AGRICULTURAL BUILDING, SHOWING PART OF THE GEORGIA, NEBRASKA AND MISSOURI STATE EXHIBITS.
(See page 709.)

Look Here

"Now I thought perhaps you could secure me a good man to take half interest a man that Mr. A. I. Root will tell me is all right. I will give him a better chance then he can get in the States. What I want is a man not afraid to work, one with good horse sense, that understands the bees. In time he can have a steady income of $1500 to $2000 a year." E. H.

The above is a sample of the many requests we are receiving for bee-keepers. The graduates of our correspondence school are going to have such offers placed before them. Don't you think it worth while to take up the course at once, and be in line for a good position? We can still take a few students at the reduced price of $10.00 for the course.

Our course is not exclusively for those wishing a position, but for those intending to learn bee-keeping, and adding to their present income. Also for those who wish an interesting study. Write to-day, for our prospectus will give you full particulars.

OCTOBER DISCOUNTS

Don't forget that for October orders we allow six per cent. Our catalog prices will be the same in 1905 as this season, so don't wait for new catalog. Every month you do you lose one per cent. A little forethought will be a profitable investment.

Orders in Nov. 5 per cent.
Orders in Dec. 4 per cent.
Orders in Jan. 3 per cent.
Orders in Feb. 2 per cent.

DANZ. HIVE

This hive is growing more and more popular as bee-keepers discover its advantages. You will not lose any thing and have much to gain by investigating it. A postal brings a copy of "Facts About Bees," telling all about the hive.

Fifty Per Cent Increase.

I have had a very successful year with the Danzenbaker hive. It gives me better satisfaction than any other hive for comb honey. I am confident it increases the honey by 50 per cent over the 8-frame hive.

Yours for continued prosperity,
JASON HOLLOPETER, Union Bridge, Md.
10-4-04.

FOR SALE

An "ad" in the Honey Column of Gleanings will put you in direct touch with honey-buyers. It will cost you only 20c a line, and may save you dollars in commissions in selling your crop. Give the column a trial, for we feel sure you will be pleased.

Results.

An "ad" in Gleanings has brought me more inquiries and orders than I can fill. Give me credit for the amount until next year.

G. A. BLEECH, Jerome, Mich.
10-6-04.

The A. I. Root Co.,

Main Office and Works, MEDINA, OHIO, U. S. A.

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AMERICAN
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THE OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL

Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

GEORGE W. YORK, Editor. CHICAGO, ILL., OCT. 20, 1904. Vol. XLIV—No. 42.

Editorial Notes and Comments

Get Unfinished Sections Emptied Now.

There are some who believe it just as well that it be left till spring to have sections cleaned out that do not contain enough honey to be sold or used in the home. Perhaps the majority think it better that the work should be done in the fall, before the honey has had time to candy. If you want the bees to do the work this fall, it should be put off no longer. Pile up the supers some distance from the apiary, six or eight in a pile, and cover up so that only one bee at a time can get in. The bees will make a clean job of it without tearing the sections to pieces, as they would if free access were given.

Hot vs. Cold Water for Honey-Knives.

J. A. Green says in Gleanings in Bee-Culture: "Back in Illinois I seldom found it of any benefit to put the honey-knife in water, either hot or cold. When I did, cold water was just as good as hot. But when extracting Colorado alfalfa honey, hot water is decidedly better than cold, even in hot weather".

Locality again. He also says that while in the East honey may be extracted from combs containing unsealed brood, in Colorado it requires time and skill to do it without throwing out a large proportion of the brood.

Wintering Bees on Sugar.

Herr Willer reports in Praktischer Wegweiser that for 30 years he has wintered his bees in large part on sugar syrup without observing any evil results therefrom. Others, however, report cases of bees wintering apparently well on sugar, but dying off rapidly in spring because weakened for lack of nitrogenous matter, of which honey contains from one to 3 percent, and sugar only a trace.

Shall Sections of Honey Be Cleaned?

Some are scrupulously particular to remove all trace of propolis from sections, scraping and sandpapering them so as to make the wood look as nearly as possible just as it did when first given to the bees. Others put sections on the market just as they came from the hive, and some of these claim that their customers are better satisfied with uncleaned sections, feeling more sure that the uncleaned is the genuine article.

Whatever the difference in markets, one thing should be remembered: that customers who are well-informed will be likely to prefer the neater-looking sections, and once educated to prefer them will not be likely ever to prefer those of untidy appearance, while those customers who are ignorant enough to prefer uncleaned sections are likely to prefer the others when better informed.

Hoffman Frames Pro and Con.

Several pages of a recent issue of Gleanings in Bee-Culture are taken up with a discussion of these frames by eight different writers. If the discussion shows nothing else, it shows very clearly what opposite views bee-keepers can entertain upon the same subject.

Don't Delay Uniting Weak Colonies.

Such a caution will not be necessary for the experienced bee-keeper, but there will no doubt be some of inexperience who have continued up to the present time weak colonies that should be united, not realizing the need of haste. If you have delayed thus far, don't delay longer.

Small Hives and Large Colonies.

G. M. Doolittle, in Gleanings in Bee-Culture, champions the small hive by saying that nine Gallup frames, equivalent to 6¾ Langstroth frames, will entertain the best queen to her full capacity as to egg-laying, and says:

> "How could a larger hive give any larger colonies? Large hives do not give large colonies beyond *any* hive which gives the queen room for *her full* capacity".

If the premises be correct, it is hard to get away from the conclusion. Some, however, would probably claim a greater capacity than 6¾ Langstroth frames for the best queen.

Virgin Queens and Afterswarms.

In that neatly printed journal, the Rural Bee-Keeper, in the "Question, Extracted, and Observation Department," conducted by T. K. Massie, occurs the following:

> The American Bee Journal, page 500, says: "When a prime swarm issues, a number of queen-cells are in the hive, and in a week or more the virgins in these cells are ready to issue. If further swarming is contemplated *only one* (italic ours) is allowed to emerge, the others being guarded in their cells by the workers. A second swarm issues with the free queen, and it may be that only one of the remain-

ing virgins will be allowed to emerge, which virgin will accompany a third swarm, and this may continue until four or more swarms have issued." This is not at all true here. We caught 19 virgins in a second swarm a few years ago. In the early part of July we were at a friend's some 30 miles distant when a second swarm issued, and we found three virgin queens out with it. Only yesterday we had a second swarm, and found five virgin queens out with the swarm. Our experience is that when a second swarm issues *every virgin queen* which is old enough to fly at the time the swarm issues will go out with the swarm.

☞ It seems to us that there is enough "tommy rot" creeping into our bee-journals under the guise of orthodox teaching, but which only tends to mystify the profession of bee-keeping, to make "one tired".

It is probable that Mr. Massie wrote that paragraph without careful thinking.

A week or so after a prime swarm issues, let him go in the evening and place his ear against the side of the hive, and if the bees intend to send out a second swarm he will hear piping and quahking. The piping is done by a young queen which has emerged from her cell, the quahking by others still in their cells. *Only one* of the young queens has been allowed to emerge, the others being guarded in their cells by the workers. These guards seem to look out for two things: preventing the emergence of the imprisoned queens, and preventing the free queen from tearing open the cells and destroying the occupants. When the second swarm issues, the guards may relax their vigilance and allow all the imprisoned queens to emerge, and they may not. That depends upon whether "further swarming is contemplated". If no further swarming is contemplated, the queens which have been quahking will be freed from further imprisonment, and a number of them may issue with the second swarm, just as Mr. Massie says.

Very likely Mr. Massie is familiar with all this, and when he has had time to think it over will take pleasure in saying in a future issue of the Rural Bee-Keeper that instead of being "tommy rot" it is the simple truth that if further swarming is contemplated only one virgin is allowed to emerge.

Mr. Massie says: "Our experience is that when a second swarm issues *every virgin queen* which is old enough to fly at the time the swarm issues will go out with the swarm". Further experience will teach him that this is by no means always the case. When a second swarm issues, and a third swarm is contemplated, a number of queens may be held in their cells fully able to fly if they could only get out of their prisons.

Miscellaneous News Items

The Southland Queen, published for some years in Texas, has recently been sold to Mr. P. F. Adelsbach, editor and publisher of the Western Bee Journal, of California. This is the second time the Southland Queen has been sold during its lifetime. Mr. Adelsbach also bought the Rocky Mountain Bee Journal some time ago. So he has three bee-papers in one now. There are now eight papers published on the American continent, devoted to bee-keeping, one of which is in Canada, and the others in the United States.

* * *

The G. B. Lewis Co. are trying to be better prepared with a good supply of sections, hives, etc., for another season by keeping their factory and full force busy now and until next spring. We called on them a week or two ago and had a very pleasant chat with Mr. Geo. C. Lewis, the genial and hustling president and manager of the firm.

They have several million feet of basswood lumber for sections, of which they are making 50,000 a day. They reported the season of 1903 an extra ordinarily heavy one for bee-supplies, but that 1904 was about 40 percent ahead, making it the best season. Mr. Lewis did not say so, but we are inclined to believe that this increased demand for their goods came somewhat from their increased advertising in the American Bee Journal this year. There are others who also would likely find a larger demand for their wares if they would use a more liberal space in our advertising columns. The American Bee Journal is read by *bee-keepers*, and they all need bee-supplies. While our list of subscribers may not be as large as some others, the quality, we believe, more than makes up for the lack of quantity. Hence, the good results from a generous patronage of our advertising columns.

* * *

St. Louis Convention and Fair.—At the National convention, Sept. 27-30, were represented about 25 States besides one each from Russia and Cuba, and two from the District of Columbia. Illinois had 35 present, Missouri, 29, Colorado 11; New York, Texas and Wisconsin, 8 each; Indiana 7; Michigan and Iowa 5 each; California, Ohio, Kansas, W. Virginia, Utah and Nebraska, 4 each; Florida 3; Alabama and New Jersey, 2 each; and 1 each from Tennessee, Mississippi, South Carolina, Pennsylvania and Minnesota. It is quite likely that there were more present than the foregoing from the different States named, but we believe their names do not show on the membership roll.

It will be seen that it was a very representative convention. It was exceedingly enjoyable, at least to us, to meet the bee-keepers from so many different parts of the land. It was a congenial crowd, too. The stings were all left at home, or else they were kept out of sight.

It seems that the Wisconsin-Minnesota bee-keepers, and also the Texas folks, failed to get together the expected carloads of people to attend the convention, so the carload that went to Los Angeles in 1903 still has the record. Perhaps if the National meets in Texas next year, a carload of Northern bee-keepers can be corralled and invade that part of the South for a few days. It would be a nice trip, even if there will be no Grand Canyon in it!

We have said nothing yet concerning the World's Fair. In many respects it is a beautiful one. But the blight of beer is written all over it. A friend of ours, who is there all the time, told us that he and another gentleman, out of curiosity, counted those drinking in only *one* beer hall one evening, and there were 2200 persons, seven-tenths of them young women and girls! Think of what that means! We should think that even a self-respecting drinker would himself be ashamed of that awful display. We hope that the exhibit of beer and beer-guzzling at the St. Louis Fair will so disgust the American people that they will soon arise ir their might and wipe the whole accursed business off th continent.

Among the exhibits of many of the States in the Ag cultural Building, are found small displays of honey. State of Colorado has, in the Horticultural Building best and most attractive display of honey and bees found in the whole Exposition. Hon. G. W. Swink has it in charge, and deserves just bushels of credit for his untiring zeal and efforts in behalf of Colorado bee-keeping.

Mr. L. D. Stilson, a leading bee-keeper of Nebraska, is connected with the general agricultural exhibit from that State. In their large booth (formed by the display of corn and various other things) they have a small "theatre", so-called, in which they put on a screen moving stereopticon pictures, that attract immense crowds. The pictures illustrate various agricultural scenes, such as making and stacking hay, rounding up and branding cattle, etc. And everything is in motion, even the attempted riding of a bucking broncho pony. It is all done to advertise Nebraska, and surely succeeds admirably. It was the only time we ever saw Dr. Miller in a "theatre"! But as his good wife was along, we didn't worry any about him! But we think it was no worse than walking down into the Grand Canyon and up again on Sunday, and A. I. Root, with several other bee-keepers, did that!

On the first page are shown two pictures taken on the World's Fair grounds by Mr. Eugene J. Hall, the special photographer for that bright advertising monthly, "White's Class Advertising", in the September number of which they appeared.

We expect very soon to present to our readers some pictures of the few apiarian exhibits that were scattered in various places. It is really too bad that bee-keeping could not have been adequately represented. Less beer and more honey would be ever so much better. We hope that at the next World's Fair bee-keeping will not be so neglected or ignored. But we doubt if a truly grand international exposition can be produced oftener than once in 25 years. Attempts at them are too frequent to expect anything approaching perfection or real satisfaction in that line.

His "Honey" was Gone.—A country newspaper man, who is very fond of honey, visited a neighboring city recently, and at one of the hotels he was served with some delicious honey. He enjoyed it so much that he told his wife all about it when he returned home. On his next trip to the city she accompanied him. They visited the same hotel, and when the noon meal was being served he said to his wife that he hoped they had some more of that honey. It did not appear, however, and the newspaper man, therefore, beckoning to a waiter, said: "Say, Sambo, where is my honey?" He was almost paralyzed when that worthy grinned and replied: "She doan work here no more, boss. She done got a job at the silk mill." The wife received a handsome new dress before they returned home, after making a solemn promise not to tell the story.—Lippincott's Magazine.

Opinions of Some Experts

What About Wiring Shallow Frames?

16.—*Where the depth of comb in the frame is but little over 6 inches, is it necessary, or advisable, to wire frames?*

C. P. Dadant (Ill.)—No.

Eugene Secor (Iowa)—No.

Mrs. J. M. Null (Mo.)—No.

N. E. France (Wis.)—I never did.

Dr. J. P. H. Brown (Ga.)—Not a bit of use to wire.

E. S. Lovesy (Utah)—I don't think I would care to do so.

G. M. Doolittle (N. Y.)—I do not use such shallow combs.

O. O. Poppleton (Fla.)—Not if proper comb foundation is used.

Dr. C. C. Miller (Ill.)—I don't use wire for any depth; prefer splints.

R. L. Taylor (Mich.)—I think not, unless the foundation is very light.

Wm. Rohrig (Ariz.)—For extracted-honey production in this locality, yes.

J. M. Hambaugh (Calif.)—Yes, especially if intended to be used for extracting.

C. Davenport (Minn.)—I do not think so, if "medium brood" foundation is to be used.

Rev. M. Mahin (Ind.)—I think not. I use frames 9½ inches, inside measure, and with medium brood foundation use no wires.

Prof. A. J. Cook (Calif.)—To quote Dr. Miller, "I on't know." I think not. Ask R. L. Taylor. His answer aall be mine.

C. H. Dibbern (Ill.)—I use such a frame, never use m es, and see no need for them if comb foundation of a cla quality is used.

. H. Elwood (N. Y.)—It is not necessary, but I think the isable where bees are carried to out-apiaries, or where ney is extracted.

Jas. A. Stone (Ill.)—I have never tried any but common Langstroth size, though I would not think the shallow frames needed it, at least after one year old.

Adrian Getaz (Tenn.)—Advisable. Sometimes the bees build up one side before the other, which has the effect of curving the midrib toward the side not built.

G. W. Demaree (Ky.)—I have abandoned the wiring of frames altogether, for I have found that as soon as combs have been in use for a short time they can be handled without risk.

R. C. Aikin (Colo.)—I do not wire. Wired frames are better, but it takes so much time, and if you have to cut out combs because of foul brood after a year or two's use, it doesn't pay at all.

James A. Green (Colo.)—Yes. A 6-inch frame is two-thirds as deep as the Langstroth, and needs wire in about the same proportion. I use three horizontal wires in a frame 5 11/16 deep.

E. Whitcomb (Nebr.)—Where extracting is to be done it would be necessary to wire the frames regardless of the depth of combs. When working for comb honey, wiring is not so absolutely necessary.

S. T. Pettit (Ont.)—I would not wire them. I would use full frames of foundation, and have them finished in extracting supers between wide slatted separators to carry a portion of the weight of the bees.

L. Stachelhausen (Tex.)—I would not use wire in such frames. Wiring frames, and to fasten foundation in such frames, is slow and disagreeable work for me, so much so that I prefer to use heavier foundation and no wire, even in larger frames, as the Langstroth.

E. D. Townsend (Mich.)—I wire all my frames, and use full sheets of foundation. I use four horizontal wires in the Langstroth, and two in the Heddon frame. The latter is not wired so much on account of the sag, as it is to hold the comb foundation in the center of the frame.

See **Langstroth Book Offer** on another page of this copy of the American Bee Journal.

Contributed Special Articles

The Ordinary Length of Bee-Life.

BY G. M. DOOLITTLE.

A correspondent writes thus: "I am a beginner in bee-keeping, and read the American Bee Journal. I see you sometimes answer questions through the columns of that paper. Will you please answer one for me? I want to know how long a bee ordinarily lives? One of my neighbors say, 18 months to two years is their age. Another says, 30 days in the summer season. What is a novice to think in this matter? Please tell how long the queen, drones, and workers live, through the columns of the above-named excellent paper.

There are somewhat conflicting opinions in this matter, but it has always seemed to me that no one need be ignorant in regard to the length of life of the worker-bee when one experiment would tell him the truth in the matter. Take a colony of black bees, and about the 10th of June introduce an Italian queen, or, if you have the Italian bee, procure a black or German queen and introduce to them, keeping record of the date when the change is made. In twenty-one days the last bee from the old queen will have emerged from its cell, and if the introduced queen went to laying immediately the first bee from this new mother will soon be making its appearance, the time of the appearance of the first bee from the new mother being jotted down also.

Now, if your experiment comes out at all as has mine along this line, you will find that at the end of forty-five days from the time the last bee had emerged from the old mother, no more of her bees will be found in that colony, if the colony remains in a normal condition, after the new queen goes to laying. At forty days bees from the old queen will still be quite numerous, they becoming fewer and fewer each day, so that on the forty-fourth day there will be a very few indeed left. This is for the summer months, and during the time of active work.

Should the season be such that the bees stay in the hive quite a share of the time, these old bees might hold out a little longer than this, as the life of the bee depends quite largely on the amount of work it does. Thus, when it labors the most, its life is the shortest. Hence it comes about that, through the inactivity induced by cold weather, the bee can live during the winter season, or season of rest, from six to eight months. This is proved by changing the queen as before, only it is done this time about the middle of September. Soon after the first of October the last black bee will have emerged from its cell, and on rare occasions I have found black bees in such colonies having changed queens during the fore part of June. Also, when spring opens or about the first of April, there will be very few of the yellow bees in the hive, which shows that very little brood is reared from October until April, as well as telling us that more bees die in two months in the spring than during six months of winter, providing the bees winter well. This also shows us that all possible precautions should be taken to preserve the life of these old bees during the spring, so that they do not die off too suddenly, or have what is known as "spring dwindling," before the brood has emerged from the cells in sufficient numbers to keep the colony in a prosperous condition.

The life of the drone is regulated very largely by the workers, for drones are usually killed or driven off by the workers long before they would die a natural death by old age. Any sudden cessation in the flow of honey from the fields is often considered sufficient reason for their being driven off or the killing of them by stinging, if they are persistent in staying in the hive; so it is hard to tell just to what age they might attain were they allowed to live to the good old age allotted to them when not persecuted by the workers. Most apiarists think that the drones would live a little longer than the workers; but from close observation with those which I have tried to preserve in queenless colonies for the late fertilization of queens during the fall months, I am of the opinion that they are of a little shorter life. It is a rare thing that I have found any out of a certain "hatch" to be alive after forty days from the time the last one emerged from the cell.

The average life of the queen, under normal conditions, is about three years, although some have been known to live more than five years. At a bee-keepers' convention a few years ago a man told me that he had one queen that he had purchased, to live to be nearly five and one-half years old, and I had one that I purchased, to live to be five years and four months old, she doing good work up to the last months she lived. Queens live also in proportion to the work they do, or according to the number of eggs they lay, as egg-laying is the only work they perform.

Under our present system of management, most bee-keepers coax the queen to lay as many eggs in two years as she usually would were she in an old tree or box-hive in three years, and from this reason most apiarists think that queens should be replaced after the second year with those which have just commenced to lay. There is no question but that a queen reared during July, August or September of any year will do as good work the following summer as she ever will; but it is a question whether it will be a paying undertaking to remove the queens throughout the whole apiary at the end of their second summer's work, and then replace them with young queens.

I have experimented along this line to a considerable extent, and the result is that I do not now make it a practice to supersede my queens every two years, for I find that the bees are quick to understand when their mother is failing, and will supersede their own queen when she gets to be too old to be of service to them. So I now trust the matter to the bees, believing that they know what is best for them in this respect better than I do. And what is best for them, as a rule, is certain to be the best thing for their keeper.

Onondaga Co., N. Y.

⁂

"The Quality of Glucose"—A Correction.

BY PROF. E. N. EATON,

State Analyst for the Illinois Food Commission.

I can not see any valid reason why bee-keepers should object to the circulation of the "Wiley lie" when they countenance and spread such articles as that copied on page 698 from Gleanings in Bee-Culture, attributed to W. K. Morrison. Knowing the editors of the above publications, I would not accuse them of intentionally circulating false statements, but attribute them rather to ignorance or oversight.

As regards the article, there is not a single truthful statement of fact from the first to last sentence, nor in the introductory paragraph. To itemize:

Pure glucose *is* sold for 10 cents per pound, and less. Chemists *do* refer to this article when they speak of the wholesomeness of glucose. The article referred to at 50 cents per pound is probably chemically pure dextrose quoted by Merck at $2.00 per pound, or chemically pure dextrin at $1.00 per pound—the chief constituents of commercial glucose.

Glucose is *not* a particularly disagreeable article. The poisoning cases in Manchester, England, were from beer made *largely* from glucose instead of containing minute quantities thereof. The glucose was *not* used for color or body, but to furnish sugar to make alcohol, thus making a cheaper beer than by the use of grain. The discovery was *not* made by *chance*, but by tracing the poisoning to the beer, and by chemical analyses thereof by public analysts.

Use of glucose in beer is *not* the principal use to which glucose is put, its principal uses being in syrups, candy, artificial jellies and jams, and preserves. Good beer is free from glucose, and the glucose variety, if not an actual adulterated article, should be sold as *glucose beer*.

Finally, the poisoning in the English beer was not due to glucose *per se*, but to an accidental impurity in the glucose—arsenic—which was due to some highly contaminated pyrite from which the sulphuric acid used in manufacture of glucose was made.

Since the discovery of arsenic in glucose beer, many other articles made from sulphuric acid have been discovered to contain traces of arsenic. Sulphuric acid, however, has not been used in this country in the manufacture of glucose for many years, hydrochloric acid taking its place, which, when neutralized with soda, le mon salt in the glucose, and which, being harmless, is not removed.

There are plenty of grounds on which to fight the sale of glucose mixtures for *honey* without entering the field of fiction. Cook Co., Ill.

[We wish to thank Prof. Eaton for the foregoing correction. What we want, and what bee-keepers want, is the *truth* concerning these matters.—EDITOR.]

OUR TOIL DOTH SWEETEN OTHERS

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Beginning with Bees—Some Questions.

1. In the spring I obtained 6 colonies of bees (just common bees); 4 of these were in 8-frame dovetailed hives, and 2 in the old-fashioned upright-box made of rough plank. They all seemed to be fairly strong in bees, but in a short while the moths had destroyed two of those in the patent hives. The other two seemed to be strong, and in July they would hang in great clusters on the outside of the hive. All at once this manifestation ceased, and the colonies have appeared very weak ever since. If they swarmed at this time I do not know it, though I tried to watch them.

I looked through all the hives about a week ago, and there seemed to be very few bees in any of them, but all that were there were workers, as nearly as I can tell. They did not seem to be storing honey, but were coming in laden with a bright yellow substance. The cells in one hive were partly filled with this. Owing to the fault of the original owner, or carelessness in moving, the frames are not properly spaced, and one cannot be removed without disturbing the others. The comb is all built from one to another. How can this be remedied? and when should it be done?

2. I saved but one small swarm during the season (I suppose others must have escaped, but I knew of only one that ran away). I was ignorant of the necessity of putting foundation in the frames, so they are all built together, too. Is it likely that this small number can get through the winter? and will they amount to anything if they do?

3. The box-hives are old and rotten; it's impossible to close them up tight, top or bottom. One of these had a quantity of comb in the top containing both brood and honey. About the last of June I took this all out down to the cross-pieces. The bees of this colony have stored a little honey since then, and seem to be hard at work now, bringing in the substance before mentioned.

The other hive is empty in the upper part, and has been so all year. The lower part is full of dark comb, but there is no honey that can be seen from either the top or the bottom of the hive. Would you advise transferring these to other hives now?

4. We are on an elevation, which we dignify by the name of "Round Mountain"—some hundred or so feet above the surrounding country, and containing about 3,000 acres. We are 4 or 5 miles from a bottom territory. The principal crops are cotton, corn, and peas. There are a good many wild flowers in spring and some fruit-bloom. So far as I know, there is nothing except perhaps a few wild flowers for the bees to work on now.

Our spring was cold and wet, and nothing was obtained from the fruit-bloom. Some one said that we had no honey-dew, either, because of the rain.

We have taken off two 24-section supers—one from each hive—which were fairly well filled, and there were 8 or 10 pounds in the box-hive. Now, do you think a few colonies in this locality could be made to produce enough honey for home use?

5. Should these few that I have survive the winter, would you advise me to depend on natural swarming, or to try forcing, and prevent swarming? The hives are not in a desirable place. They are exposed to the afternoon sun. Shall I let them winter where they are, and then remove in the spring?

6. Do you think my bees need feeding now? How and what should they be fed?

7. While examining the bees lately, I found a large nest of the common black ant under the bottom-board of two hives. Would these interfere with the bees?

Faulkner Co., Ark., Oct. 3. MRS. C. H. NELSON.

1. The sudden change from strong to weak colonies was almost surely caused by swarming. The yellow substance is pollen, and the likelihood is that while storing pollen they are getting some honey, even though it be only enough for their daily needs. Let the crooked combs alone till fruit-bloom next spring. Then, smoking the bees a little, turn the hive upside down; with a long knife or a saw cut away the attachments of the comb at each side, and lift off the hive from the comb. This is on the supposition that the bottom of the hive is loose, and if not loose you must pry it off anyhow. When the body of the hive is removed, and the frames are open before you, you may find that only a little straightening is needed; a comb attached to a frame most of its length may need cutting away from the adjoining frame only a little, and then crowded into place in its own frame. If any or all of the combs are built too crooked for this, you must cut them out and transfer according to instructions in your book for transferring.

2. With your mild winters a colony might live through even if pretty weak (and it's not easy to guess how weak yours is), and if it lives through till spring there's a chance for it to amount to a good deal.

3. No, don't transfer now. Begging your pardon for disagreeing, you can close them up quite tight if you have plenty of rags to stuff in the cracks and holes.

4. Hard to say positively, but from what you say about their work this year, I think you can produce more than one family would be likely to consume, and have some left to give away. Your bees have done a good deal better than ours have done some years.

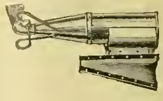
5. I don't know—not well enough acquainted with you to tell. Likely you better try some each way so as to find out what will best suit *you*.

6. Those from which you have taken surplus are not likely to need feeding, yet will do no harm to make sure. Sugar syrup fed in the way directed in your bee-book will be all right.

7. Not if they're the same as the common black ant of the North, but in some parts of the South there are ants that are very destructive. If you have that sort. which go into the hives and kill the bees, you can have your hives on stands or benches with legs, and have the foot of each leg standing in an old can or something of the kind kept filled with water. Better if a little oil is kept on top of the water. The water will not evaporate so fast, and the ants dislike oil.

"The Hum of the Bees in the **Apple-Tree Bloom"** is the name of the finest bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us *one new* yearly subscription to the American Bee Journal at $1.00.

Proceedings of Conventions



The Hamilton Co., Ohio, Convention.

BY WM. J. GILLILAND.

The annual meeting was held in Cincinnati, Monday evening, Sept. 12, at 8 o'clock, when the following officers were elected for the ensuing year: President, Fred W. Muth; vice-president, John C. Frohliger; treasurer, G. Green; and secretary, Wm. J. Gilliland.

Executive Committee—R. L. Curry, A. E. Painter, C. Kuck, E. P. Rogers, E. H. Chidlaw, Wm. McLennan, E. H. Vaupel, Theo. Meyer, Wallace Burch, Dr. A. B. Barker, Wm. R. Gould, and Miss Carrie Boehme.

THE SECRETARY'S REPORT.

The secretary presented his report as follows: The Executive Committee has much pleasure in presenting its second annual report, which indicates a continuation of the prosperous condition that has been shown since its organization, a marked increase in membership, and a continued influence amongst bee-keepers in the immediate neighborhood, county, and adjoining States.

The most important event of the year, was the enactment into law of a bill for the treatment of foul brood, and the appointment of a foul-brood inspector under its provision. The promotion of this measure was undertaken by us. Valuable assistance was rendered by the Hamilton County representatives, led by Mr. D. R. Herrick, who took charge of the measure in the House, and exerted his influence in pushing the bill to its final stages and ultimate passage. This is the first attempt at legislation in the State of Ohio, in the interests of the bee-keeping fraternity, and the Hamilton County bee-keepers may be termed the pioneers of bee-legislative measures in Ohio.

The next matter of importance which we were instrumental in advocating, was the addition of a honey-schedule and premium list at the Hamilton County Fair, at Oakley, Ohio. Quite a collection of extracted honey in jars, and comb honey in sections and supers, was exhibited, and substantial premiums were awarded to competitive members of our Association. It is a fact that we regretted that more bee-keepers did not avail themselves of this opportunity to compete. We would remind them to make preparations early next year, and make a showing that would be creditable alike to the bee-keepers and to the influence of this Association.

The year ends with 58 subscribers on the roll of membership as compared with 47 last year—an increase of fully 25 percent. This increase is made up of principally practical bee-keepers, who manifest a desire to learn the best methods in modern bee-keeping.

During the year, now ended, were held 12 regular and 4 special meetings, making 16 in all. The attendance was a very good average, considering the variable weather and long distances a great many of the members had to travel to attend the meetings. WM. J. GILLILAND, *Sec.*

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses. By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

OUR DAUGHTER'S NEW STYLES.

Laws a me! And is it a new dress and a new style of walking that our daughter must be putting on now? Enemies might say she should be less vain now she is coming 44 in age. But, then, just as other folks' darling daughters are still dear, vanity and all, so shall ours be—I 'spect. And she spreads for my reflection on my page the motto: "Our toil doth sweeten others." Alas, my toil sometimes makes them a little sour!

HONEY IN 60-POUND CANS.

It would be nice to have all 60-pound cans cased singly—that is, nice in some respects. It seems the danger of being put wrong side up is much increased when the package is tall and small enough to handle easily. Make the fellow grunt just nicely and he'll forbear to throw the package, and also forbear to tip it over. But there is also some complaint that the boxing tears off from two 60-pound cans cased together, sometimes in such a way that folks sample the honey on the road. Page 630.

BEE-KEEPING IN A CITY—SWARMS, ETC.

Sounds a little queer to talk about a different bee-climate in different parts of the same city. A little abnormal in this respect San Francisco may easily be. In fact, I suppose several square miles of tall buildings anywhere tend to check a prevailing wind to those dwelling on the lee side, somewhat as a forest would do; and if the fogs keep near the water mostly that may count heavily.

As to the first arrival of bees, I wonder what it is that Mr. W. A. Pryal means by "Close on a century ago, if it is not that far back already". Is it a matter of doubt whether or not the Spaniards brought in bees about 1804? We can hardly call 1849 close to a century ago.

We hardly want to trust our swarms of bees to the sophomoric bungling of the officials of a city health department. That's the main objection to keeping bees in a crowded city. They will swarm; and there's no telling what mischief a swarm of bees may kick up.

And, rather unique among human beings, Mr. P. wants some more poetry. Bless his sweet heart, he shall have it.

A swarm of bees in March
Is worth a box of starch.
A swarm of bees in April—

No poet alive can rhyme that. Or shall we misplace things, and read—

An April swarm of bees
Is worth a chunk of cheese?—Page 628.

"QUEEN-EXCLUDERS AND THEIR USE."

Mr. Holekamp's experience, and Mr. Dadant's comments thereon (page 631), are of decided interest. It occurs to me that we may be laying rather too much at the queen's door as to the well-known reluctance to carry the brood-nest across spaces and wooden strips. It's quite possible that the queen "don't care a copper" about it, except this one thing, that she don't like to lay in a cell unless it is nicely polished out. We can imagine instead that the workers find it a little awkward to get begun at polishing in the first few cells off decidedly by themselves. Or we may lay it to a different gang of workers that do not complete removing the contents of the cells. Whatever the cause is, the result has wisdom back of it. A trifling amount of segregated brood is not quite so safe in severely variable weather.

THAT ARTIFICIAL-EGG STORY AND FACTORY.

Besides the burlesque of Mr. S. F. Newman, I think the assertion has been made—some time, some where—that there was once a factory of artificial eggs. No attempt was made to deceive, if I keep the idea, only substances suitable to use as a substitute for eggs were put in the general shape and appearance of eggs to capture the popular fancy. I think it was added that the factory soon failed and ceased operations. Don't say as I fully believe the story; but there seems no call to disbelieve it fanatically. Perhaps the only reason why the thing could not be realized is that material to make a really good substitute for an egg costs more than the egg itself does. If I were bossing the factory I wouldn't essay a shell with fluid contents; but I'd have the whole thing a little harder than putty, and with a nicely buffed and polished surface. Page 633.

ALTOGETHER TOO SWIFT FOR BELIEF.

Surely, there must be something wrong about those bees that flew 150 miles an hour. The two minutes named would largely be consumed in loading up, even from open cells of honey. Much more than two minutes is usually required to load from flowers. Then the five miles would have to be flown in less than no time. Page 629.

Ask Doctor Miller ??

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. MILLER, Marengo, Ill.

Vetch and Rocky Mountain Bee-Plant.

1. Did your vetch do well this season? Mine did not, as there was too much rain here for it. But the bees did very well, I think. For new swarms 88 pounds per colony is pretty good.

2. Will you please give us the post-office address of some one to whom we can send for the seed of the Rocky Mountain bee-plant? MISSOURI.

ANSWERS.—1. No; but it didn't have a fair chance.

2. Ask any leading seedsman for Cleome integrifolia.

◆

Superseding—Cane Juice for Winter Stores.

1. A small swarm—about a pint of bees—issued from a full colony Sept. 28. Was it a case of superseding, and the old queen swarmed out rather than be killed?

2. Would raw cane-juice be good to feed for winter stores? My bees are working at the cane-mill in great numbers. ALABAMA.

ANSWERS.—1. Possibly, but hardly. More likely a case of superseding, and a number of the bees going out with the young queen on her wedding-trip.

2. They would probably be better without it; but a small amount may do no great harm.

◆

Cleome or Rocky Mountain Bee-Plant.

1. Please give a description of cleome. If planted in the spring will it flower during the summer?
2. What soil is best for it?
3. Is it an annual?
4. What time in the year should it be planted?
5. Where can I get the seed? IDAHO.

ANSWERS.—Cleome integrifolia, or Rocky Mountain bee-plant, grows wild in some parts of the West in large quantities, and is an excellent honey-plant. Some years ago it had quite a boom, and seed was planted largely. But it is doubtful that anyone who sowed seed ever got back the cost of the seed. A. I. Root found it inferior to its near relative, the spider plant, although neither was worth cultivating. It is doubtful that it is worth while for you to try it if it does not grow wild with you. You can get seed from leading seed-dealers. It should be sown in spring; is an annual, so blooming first year. I don't know what soil suits it best. I know it does well here in good garden soil; but the acres of it I saw out West were growing wild on land that looked to me poor.

◆

Winter-Feeding in the Cellar—Pollen in Sections—Bottom-Starters—Queenless Bees and Comb-building.

1. I have some honey in shallow frames which I would like to use for winter-feeding in the cellar. Is it all right to set these frames on top of the hives?

2. Why is there so much talk in the bee-papers about pollen in the sections? Do the consumers object to it? I like a little in the honey.

3. You have said in Gleanings in Bee-Culture that a bottom-starter should be ⅝-inch wide, but with the foundation on the market there is no room for such a wide starter. Do you cut off that bottom-starter from the top one, or do you have your foundation made to order?

4. You also say in Gleanings (page 791) that queenless bees are likely to stop building comb. I removed a queen for certain reasons, and the bees did almost nothing. This puzzles me, and I would like to know how Mr. Elwood and others manage when they cage the queen to prevent swarming. CENTRAL WISCONSIN.

ANSWERS.—1. It's all right if the bees will go up to them. There is some danger, especially with a weak colony, that the bees may not go up to the frames above. If given before being taken in the cellar, so the bees would get started on the frames, or if stirred up a little in the cellar there ought to be no trouble.

2. There is no objection whatever to pollen in the sections for people that like that sort of thing. Most people, however, would object most decidedly to such a thing, and if you have any of that kind of honey you will do well to reserve it for home consumption, seeing its suits your taste.

3. My foundation is of the regular size offered in the market, 3⅞ x 15½, and each sheet cuts four pieces, 3¼ each, and four pieces ⅝ each.

4. Queenless bees are little inclined to build comb, what they do build being almost exclusively drone-comb; but if a flood of honey is coming in and they have no other place for it they will build comb in which to store it.

◆

Perhaps Not a Queenless Colony—Feeding for Winter Stores.

On June 29th, when returning from work I noticed a swarm of bees on a fence-post. I hived them in an ordinary soap-box about a foot deep. I did not inted to keep them, but became so interested after awhile that I decided to do so. About two months later I purchased a hive (bar-frame) containing 9 frames. I put full sheets of foundation on 5 frames, and managed to get the bees into the hive. But I am afraid I either smothered or killed the queen in transferring the swarm from the box. I have looked for her often, but do not find her.

I could not do otherwise than make a mess of the transferring, as all the combs were built in a semi-circular form, beginning in the northeast corner of the box, and extending toward the center. I took the comb that was straight enough, fixed it on a frame with wire to hold it, and put it in the body of the hive, thinking that the bees would use it again for storing honey, or for the queen to lay eggs in. Whatever brood there was hatched out all right, but the bees would not keep the young ones in the hive. Now I find that not an egg is laid in the old comb. Instead, they are building new comb over it, all the cells in the old combs being empty. I am feeding them syrup.

I purchased and put into the super 7 one-pound sections of honey, and they consumed it all. I put 4 of the empty section-boxes with comb on a frame, and hung them in the hive, thinking the bees would use it for storing, but they don't use it at all. They are building very white new comb, and building it upward over the top-bar of the frames. Honey is stored in some of the new cells, but not an egg can I see in the hive.

The bees are what I would call Italians, having three bands. The drones are of large size. The bees are very amiable, as I handle them without veil or gloves. I have been stung but once, and that was just before a thunder-storm.

Will you kindly answer the following questions:

1. Is the colony queenless?
2. If so, must I furnish them another queen now, or wait till spring?
3. What grade of queen would suit best?
4. Would I better take out the old comb, or leave it on the frames all winter?
5. Can I winter them on syrup, or must I feed honey?
6. If I have to introduce a new queen, which way is the better, by cage or by daubing with honey? ONTARIO.

ANSWERS.—1. You give no positive evidence that they are queenless, and some circumstantial evidence that they are queen-right. If I understand you correctly, they have been building comb while they had comb that they might have used without building new. Queenless bees would hardly do that. You don't say whether the new comb is worker or drone. If mostly worker, you may be confident a queen is there.

2. Better wait till spring, in view of the possibility of a queen being present.

3. That depends on your desires; probably an untested queen would suit all right.

4. I confess I don't have a very clear idea of just how things are; but probably it will be best to make no change at present.

5. They ought to winter all right on syrup.

6. Cage.

Queen Accepted but does no Work.

On the 24th day of August I purchased a golden Italian queen. She was accepted all right by the bees, but up to Sept. 24th there was no brood in the hive, and she had not even laid the first egg. Do you think she will be of any service in the future? I have kept bees for a good many years, but have never had anything of this kind happen before. What is the cause of it? OHIO.

ANSWER.—I don't know. Probably, however, it may be accounted for in this way: It is not an unusual thing for queens to stop laying in September, sometimes early in the month, especially if bees are not gathering much. Neither is it an unusual thing for queens sent through the mails, or even introduced without being mailed, to be several days at beginning to lay (I've had them a week or more that had not been mailed) even when honey is yielding well. Your queen, introduced Aug. 24, would be doing nothing very unusual if she should not be ready to lay till the first week in September, and by that time laying would be slacking up, and queens not already laying would not begin at all. You may find her laying all right next spring.

Introducing Queens.

1. When you place a caged queen to be introduced in the hive, what should be the manner of the bees toward the caged queen if favorable to her acceptance?

2. When the bees hold on to the wires of the cage so tenaciously as to require their being pulled loose, what does it indicate?

3. The object in asking the above question is to know what should be the manner of the bees toward the queen while in the cage.

4. How long after the queen has been removed should the other one be placed in the hive caged?

5. I tried daubing the queen with honey in turning her loose among the bees after she had been in the hive caged for 24 hours. They seized and balled her at once. Do the bees ever release a queen of their own accord under such circumstances?

6. I notice in one of the back numbers of this paper someone recommends putting bees from the hive into which the queen is to be introduced in the cage with her instead of those from her own colony. I tried this, and the bees seized hold of her as though angrily disposed toward her. Has this plan been much tested, and have you ever tried it? MISSISSIPPI.

ANSWERS.—1, 2, and 3. The answer on page 650 has reference to a queen that is free, and what you want to know refers to a queen in a cage, which is quite another story. It isn't always easy to tell by the deportment of the bees just how they do feel toward a queen that is caged. When they seize hold of the wires, as you mention, and hold on tenaciously, you may count it as an indication of hostility. They will, at the same time, seem to hug close down to the cage. If kindly disposed they are loosely located on the cage, and occasionally you will see some of them offer food to the queen. That's not very full information, but I'm not at all sure that I can do any better. If any one can tell better as to the signs of friendship or hostility to a queen in a cage, I shall be thankful for the help.

4. Sometimes the caged queen is put in the hive at the time the old one is taken, and sometimes the colony is queenless two or three days before the caged queen is put in the hive. E. T. Abbott, however, advocates putting in the caged queen without removing the old queen, then three days later removing the old queen and freeing the new one at the same time.

5. Bees sometimes release a queen after balling her, and it is possible they might under such circumstances.

6. I don't think the plan has been much used. I don't think I ever tried it when introducing a queen, although I have a number of times given strange bees to a queen in a cage, and they were always kind to the queen. But I was careful to use bees rather young, the kind that stick their heads in a honey-cell when a frame is taken out.

Please don't threaten to ask no more questions. I like to get questions that are not fully answered in the books, and if you don't get the information you want, "try, try again."

Wintering Bees with Potatoes and Plants.

I have a large cellar under the house with a furnace. I have it so partitioned off that it makes a fine place for the bees to winter, as I can ventilate it at will. It is also a nice place for potatoes. Do you believe that I can safely put potatoes, also flower-plants that are dormants, in with the bees? ILLINOIS.

ANSWER.—I shouldn't be afraid of it.

Straining Extracted Honey—Extracting Supers Cleaned by Bees.

1. I am much troubled in straining my extracted honey. I can not strain as fast as I extract. What method is used by bee-keepers who have from 50 to 75 colonies?

2. I have moved my extracting-supers away from the yard, placed them on a bottom-board, covered them up tight, and contracted the entrance. Will the bees clean these out all right? NEW YORK.

ANSWERS.—1. Various ways are used. Some have cheese-cloth fastened under the extractor. If this be spread out like a sheet, to make a large surface, or if so arranged that a large bag can be suspended under the extractor, the warm honey will go through fast enough. Others have the strainer stretched over the vessel into which the honey is received. It is important to have a large straining surface. E. D. Townsend, who extracts on a large scale, says there is no need to strain at all. He has a faucet at the bottom of his honey-tank, and within 24 hours the honey may be drawn off to be canned, all the impurities going to the top where they may be skimmed off; at least they need not be drawn off at the bottom.

2. Yes, there ought to be no trouble. If the combs are old and tough the entrance need not be much contracted. If the combs are new and tender, too large an entrance will allow the bees to tear them.

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

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Reports and Experiences

Yellow or Hop Clover.

I send a plant which came up among alsike clover. It is a clover, but no one around here has ever seen it, and I can not find the name of it. What is it?
J. A. WEISSENFELS.
Chippewa Co., Wis., Sept. 22.

[The clover in question is the yellow or hop clover, from the yellow flower-head and the brown color which it has when older. In common with other clovers, it probably contributes its share of nectar.—C. L. WALTON.]

Values the Bee Journal.

I wish to say that I think the American Bee Journal the cheapest dollar's worth one can get of that kind of literature. I read it regularly; I profited by it to the value of much more than I paid.

My bees did fairly well this summer, though my wife had to do the work at swarming-time.
H. BEERS.
British Columbia, Sept. 21.

Rain in Central California.

About two weeks ago we were having unusual rains, but soon thereafter the storm let up. We never had so much rain before in September. In this city the record was the greatest—5.07 inches; 1.70 at Fresno; something like 3 inches at Sacramento and Stockton, I believe; and .28 at Los Angeles. The weather was nice and mild; then, after the rain, the days were pleasantly warm, and—oh! my, how vegetation sprung out of the earth! In 3 days alfilaree seed germinated and put forth its first leaves; in 4, burr-clover and marshmallows were above ground. In a week the hills were again visibly green. At this writing the hills and valleys are again as verdant almost as they were in April. Just think, only a fortnight ago the hills seemed as dry and parched as a new-burnt brick. Now another rain is upon us, and may last a few days. Of course, we are not in need of these rains. California farmers, like farmers the world over for that matter, are always behind time in getting their crops under cover. Hay, grain, beans, and any amount of raisins and prunes that were in course of being dried in the open air were ruined. Thousands and thousands of dollars worth of such crops were damaged, as also hops, grapes, and other fruit and vegetables easily ruined by untimely moisture.

While many have been harmed by these rains, the owner of bees will be

The Demand for Moore's Strain of Italians

was so great in July and August that he was compelled to withdraw his "ad." from the American Bee Journal, to keep from being overrun with orders; but he is now UP WITH ORDERS, and sending Queens BY RETURN MAIL, bred from his FAMOUS LONG-TONGUED RED-CLOVER STOCK, which has won a world-wide reputation for honey-gathering, hardiness, and gentleness. This is the same stock which W. Z. Butchinson advertised for several years under the name of "SUPERIOR STOCK."

Prices: Untested Queens, 75c each; six, $4.00; dozen, $7.50. Select Untested. $1.00 each; six, $5.00; dozen, $9.00. Safe arrival and satisfaction guaranteed. Descriptive circular free.

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	Price before July 1st. 1	6	12	After July 1st. 1	6	12
Untested	$ .75	$4.00	$7.50	$ .60	$3.25	$ 6.00
Select	1.00	5.00	9.00	.75	4.25	8.00
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the gainer. Bee-feed will get an early start, and there should be a strong stand of honey-secreting flowers next year. We can look for big fields of mustard and wild turnips by Christmas. Then, alfilaree and other early flowers will give the bees all they can do to gather the early honey. Mind you, I am not predicting a big honey crop for next year. "There is many a slip 'twixt the cup and the lip."

W. A. PRYAL.

San Francisco Co., Calif., Oct. 8.

Bee-Stings Help Rheumatism.

I can give you the *proof* that bee-stings will help rheumatism. Four years ago, as a result of a fall on the ice, I had rheumatism in my shoulder, and could not raise my arm any higher than my eyes. When I took the bees out of the cellar I got two bees to sting me on the arm. Just before the stinging I tried to raise my hand, but could only reach the eyes. One minute after the stinging I could move the arm as high as I wanted to. But the effect was not lasting; I did not get entirely cured until I began to work steadily with the bees.

And while I am at it I might just as well give you the proof of another statement I made two or three years ago, viz.: That sometimes, at swarming-time, bees do carry a clipped queen. A friend of mine in Vernon Co. hived a swarm which, on the next day, left the hive and started for the woods; he being present at the time drove them back by throwing water on them. After awhile they came out again and then he clipped the queen. But the next day they left for the woods; his folks noted the direction they took, and about a week after he hunted them up, cut the tree down, and *there was his clipped queen.* At that time there were no bees nearer than 4 miles. The tree he cut down was ¼ mile from the yard.

As I clip all my queens, whenever a swarm issues while I am in the yard, I hasten to the hive in order to cage the queen, so as to make sure of her. It has twice happened that I did not see the queen, but afterward found her on my hat. How did she get there?

Several times also I have seen the queen come out last of all, one or two bees bringing her out "by the ear", so to say. In such cases I have caught her and put her in a cage. But next time it happens I'll watch to see what the bees do. GUSTAVE GROSS.

Jefferson Co., Wis.

"King-Birds Again!"

Please allow me to thank Mr. Hasty (page 683) for calling attention to the "wild" figures which appear towards the end of my article on king-birds (page 623). These figures are supposed to represent the number of bees that eight king-birds would eat during the entire period they are here, if each bird limited his bee-eating to one hour a day, and are given in my letter as being 378,000! Whereas the number should be 63,000. The number of bees that these birds destroy is sufficiently wonderful without having the total multiplied exactly six times! I do not know now how I arrived at this total in my first letter, and can not imagine how so huge an error could have passed

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GUS. DITTMER, Augusta, Wis.

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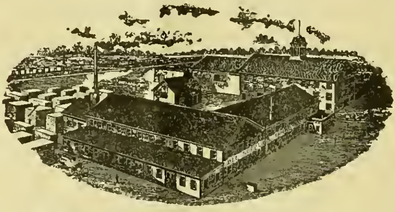

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unnoticed. "Ye Editor" might have spotted it and corrected it for me before it went into print!

I would like to add that it is *exceedingly* unlikely that each bird would confine himself to one hour a day in his bee-eating, which is the supposition on which these figures were based. It is almost certain that the birds would feed at least twice a day, morning and evening, and it is quite likely that their visits would be even more frequent.

I would also like to state that at the time these observations were taken (Aug. 12 to 14) there were 30 colonies in the apiary, all very strong and all busily at work, so there were continual streams of bees going out and coming in. "A BEE-KEEPER IN VIRGINIA."

Augusta Co., Va.

Results of Inhaling Bee-Poison.

On page 660, the doctors among your readers are invited to give their opinion, and, if possible, a remedy in such cases as that of Mr. W. W. Shafer. I am not a doctor, only a plain farmer, but I will give the experience I had which is similar to that of Mr. Shafer, and I think such cases are not at all rare, especially among old people. For I know of another bee-keeper, who is also a doctor, who lives four miles from here—a man 73 years old, not 73 years young, as Dr. Miller is—who has had the same experiences. (I saw Dr. Miller at the St. Louis convention, and I think he looks younger and better than his pictures in the bee-papers.)

It is my opinion that the sickness in such cases is not caused by the stings, but by inhaling the poison thrown out by the bees when we open their hives and smoke them.

Last year, when working with the bees one day, I took the cover off of a hive, and the colony being very strong the top of the frames were covered with bees. I had not smoked them enough, and they rushed out at me. Four or five of them stung me on the right hand, and one on the side of neck, whereupon I immediately became sick at the stomach, and my eyes became affected by a peculiar dizziness for a few seconds. I drank about a pint of water for the purpose of diluting the poison in the stomach, and also took a dose of Apis melifica, a homeopathic remedy made of the bee-stings. In a short time the sick feeling passed off, and was followed by

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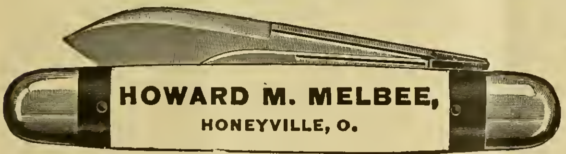

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The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

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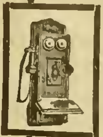

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a chilly feeling and a severe itching of the toes of both feet. All this took place within 30 minutes, after which I felt as well as ever.

I believe that drinking the water, thereby diluting the poison, is the best remedy, the Apis melifica being useless. But it would be the proper remedy if caused by stings, and it might have relieved Mr. Shafer had he taken it after vomiting.

I came to the conclusion that the sick feeling was caused by inhaling the poison, because of my previous experiences. On several occasions, when working with the bees for any considerable length of time, I would begin to feel slightly sick at the stomach, and knew it was time to quit.

Mr. Shafer says that he has been stung very often and never minded it, but you will notice that in both instances of which he tells us, when he did become sick, the bees were exposed. I get stung very often, when walking among the hives, without any ill results. MISSOURI.

Effects of Bee-Stings.

I receive the American Bee Journal regularly every week, and the more I read it the better I like it. I could not get along very well without it. I notice in the last number that some bee-keeper has had very serious trouble with bee-stings. I wish I were able to give a remedy, but I can not. It looks as if the bee-sting has very bad effect on some people. The first swarm I had in the spring stung me so badly on the hands that they were swollen so that I was not able to work the next day, but now I don't pay any attention when they sting, and it does not swell to amount to anything at all. But my 14-year-old daughter had taken off her shoes one evening, and went out in the yard and stepped on a bee; it stung her, and it was so very painful that she complained for some time. She went to bed, and it was not long before she seemed to get worse. She said she itched so she could not stand it, so her mamma lighted the lamp and examined her, and she was broken out all over with welts, as we call them, half as large as a hen's egg. Her mamma got some flour and rubbed her for about half an hour, and the bumps disappeared, and she got all right, only her foot was swollen some the next day. Of course, flour is no remedy for bee-stings, but when I was a boy I would break out with those welts, and I recollect that they called it malt-itch, and that was what they did for it was to rub with flour, and that was why we tried flour on the daughter, and it had the desired effect. I suppose it was the bee-sting that caused the bumps to come out.

I write this simply to tell what effect the bee-sting has on some people. I wish I knew some remedy for the sting. I have used coal-oil, turpentine, and onion juice, with good results, and at other times none of them do any good.

Long may the American Bee Journal live! W. C. EDGWORTH.

Pulaski Co., Ark., Oct. 3.

Alfalfa in Louisiana.

This was the worst season I ever experienced. I suppose it was caused by being at the World's Fair during the several months my bees needed my attention, and in place they got that of less interested ones. Our spring here was not as favorable for the bees as was that north of the Ohio River, but the fall bids fair to make up for it. Our bees work until about Dec. 15, when we fix them up out-doors for winter, which lasts until March 1. We have two honey-flows, one from March to July, and the other from September to November. Alfalfa is being rapidly introduced here, and if it keeps up at its present rate this will be the finest bee-district in America. Unlike Colorado, we will have as much honey and no dreary winters, which will make this the ideal home of the bee. WM. THIELMAN.

East Baton Rouge Co., La., Oct. 3.

The "Laws' Baby Nucleus".

The "baby nucleus" is going the rounds—falsely called the "Laws' Baby Nucleus"—and Louis H. Scholl, in the report of our State bee-keepers' convention, says that Mr. Laws was the first to present it to the bee-keeping world, and therefore deserves the credit for the plan. Mr. Laws gave Mr. Bankston credit for its origin in the convention, and as to the frames he uses that is a thought of mine, as he knows. It is a mistake to say that it has not before been presented to the public, for it was published in the American Bee-Keeper in the spring of 1903, from the pen of C. B. Bankston. It was also written up by me for one or two other bee-papers.

Mr. Bankston sent his first article to

CONVENTION NOTICES.

Wisconsin.—The convention of the N. E. Wisconsin Bee-Keepers' Association, to be held in the Opera House at Mishicot, Oct. 25, 1904, will be called to order at 10 a.m. Election of officers and other important business will be transacted in addition to the program recently published in this journal. DR. J. B. RICK, Sec.

Mishicott, Wis.

Texas.—The Southwest Texas Bee-Keepers' Association meets in San Antonio, Thursday and Friday, Oct. 27th and 28th. This will be a rousing and important meeting, and all bee-keepers are cordially invited to attend. For program and place of meeting address,

H. H. HYDE, Pres.,
129 N. Flores St., San Antonio, Tex.

Georgia.—The bee-keepers of Georgia will meet Oct. 21st. at 10 a.m., at 20½ Cotton Ave., Macon, Ga., during the State Fair, to organize a bee-keepers' association. Every bee-keeper or other person interested is invited to be present.

Cordele, Ga. J. J. WILDER.

Connecticut.—The Connecticut Bee-Keepers' Association will hold their fall meeting at Hartford, in the Capitol building, room 50, Nov, 10, commencing at 10:30 a.m. There will be a question-box open to all. All bee-keepers are invited to attend, bringing friends with them and one or more questions that they would like discussed. There will be two or three papers by prominent bee-keepers. Please bring a sample of your this year's honey crop, or some apiarian fixture that you would like to show. E. E. SMITH, Sec.

Watertown, Conn.

Illinois.—The Illinois State Bee-Keepers' Association will hold its 14th annual convention in Springfield, Tuesday and Wednesday, Nov. 15 and 16, 1904. On account of the I. O. O. F. the railroads of the State give reduced rates, notice of which will be made later herein. We expect to have a good program, and with a membership of more than a hundred we are expecting a larger attendance than ever before. Come, and bring your neighbor bee-keeper—for the importance of this meeting will go a long way in securing the appropriation for continuance of the bee-keepers' law of this State.

Rt. 4, Springfield, Ill. JAS. A. STONE, Sec.

Some Good Clubbing Offers.

A good many subscriptions to the American Bee Journal should be renewed at once. We wish to call special attention to the following, which we are sure will commend themselves to many of our readers:

No. 1—	The Bee Journal and Dr. Miller's "Forty Years Among the Bees" (book alone, $1.00)................	Both for	$1.75
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the Bee-Keepers' Review for publication, but the editor returned it, saying that he could not see any advantage in it. Later he published an article from Mr. Laws on the same subject. This looks to me like a disposition on the part of bee-keepers to elevate one and hold back another. This is not right. Some honor is due a man for his originality. There is not an idea connected with the baby nucleus that originated with Mr. Laws, Mr. Hutchinson, and Mr. Scholl, to the contrary notwithstanding. I have reduced the system to a more practical one, but I want to say that every idea about this matter that I have put forth in the bee-papers (save the frame that Mr. Laws uses) has been wholly, or in part, gathered from the brains of others.

We should all be ready to write on the things we have learned, and thereby help one another, not trying to elevate ourselves. JOHN W. PHARR.

Goliad Co., Tex., Sept. 25.

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Honey and Beeswax

CHICAGO, Oct. 8—The receipts are now larger than the immediate requirements, but no material change in price is noticed. The best lots of white comb bring 13@14c, with lower grades ranging 1@3c less. Extracted, white, in cans and barrels, 6½@7½c; amber, 5½@6½c. Beeswax, 28@30c. R. A. BURNETT & Co.

KANSAS CITY, Sept. 22.—Market on comb honey is quite active at $2.75 per case for fancy white stock. Extracted rather slow at 6½@7c. We look for the demand on extracted to pick up considerably with cooler weather, Beeswax in good demand at 30c per pound.
C. C. CLEMONS & Co.

BOSTON, Oct. 11.—We quote our market for white comb honey from 16@18 cents; for No. 1, 14@16c. There is a good demand, and receipts are not excessive. Extracted honey wanted, with practically no stock on hand.
BLAKE, SCOTT & LEE.

NEW YORK, Oct. 8.—There are no new features in the honey market. White honey is arriving quite freely and meets with fair demand at 14@15c for fancy white, 13c for No. 1 white, and 11@12c for amber. Hardly any buckwheat has arrived as yet, and prices on same are not established. First grade of buckwheat honey will sell at from 10@11c. Extracted honey in good demand at unchanged prices. Beeswax market dull and declining.
HILDRETH & SEGELKEN.

ALBANY, N.Y., Oct. 11.—The honey market is steady here at 15c for best white comb, and 12½@13½c for buckwheat. The weather is cool and favorable. Extracted, white, 6½@7c—slow; buckwheat, 6@6½c. Beeswax, 28@30c.
H. R. WRIGHT.

CINCINNATI, Sept. 15.—There is an improvement in the honey market, so far as extracted honey is concerned. The demand has increased considerably, but the supply is limited, owing to the fact that bee-keepers in general are mistakably holding their crop for better prices. We quote amber extracted in barrels at 5½@6c: white clover in barrels and cans at 7@8½c, according to quality. The comb honey situation is badly demoralized, being aught but encouraging. Quote fancy white clover comb honey at 14@15c. Beeswax, 26@28c.
THE FRED W. MUTH Co.

PHILADELPHIA, Oct. 8.—The honey market has been quite active in the last 10 days. Quite a good many arrivals. There seems to be a bigger diversity in range of prices than we have seen in this market for years. A number of shipments have been sent to commission men with instructions to clean them out at the best price. This has hardly made an established market price for any of the grades of comb. We quote: Fancy, 16@17 cents; No. 1, 14@15c; amber, 12c. Extracted, fancy white, 8c; No. 1, 7c; amber, 6½c. Beeswax selling freely at 28c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

SAN FRANCISCO, Sept. 21.—White comb, 1-lb. sections, 12½@13c; amber, 9@11c. Extracted, white, 6@6½ cents; light amber, 5@6c; amber, 4@4½c; dark amber, 3¼@3¾c. Beeswax, good to choice, light, 29@30c; dark, 27@28c.

Spot stocks are of rather light volume and are mostly of amber grade. There is little selling pressure, especially on good to choice honey. Some holders are contending for stiffer figures than are warranted as regular quotations. Not much is changing hands, and business doing is principally on local account.

CINCINNATI, O., Oct. 8.—Comb honey is now coming in more freely, and prices if anything have a little moderated. The sales made and prices obtained were for No. 1 fancy water-white comb, 13@15c; No. 2, 12½@14c. Extracted is sold as follows: White clover, 6½@8c; amber, in barrels, 5¼@5½c; in cans, 6@6½c. Beeswax, 27c. C. H. W. WEBER.

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5 " " " Dec. 1. | 2 " " " Mar. 1.
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44th Year. CHICAGO, ILL., OCT. 27, 1904. No. 43.

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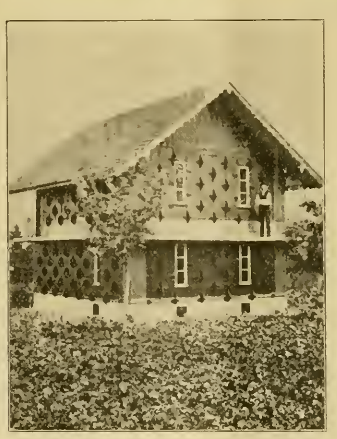
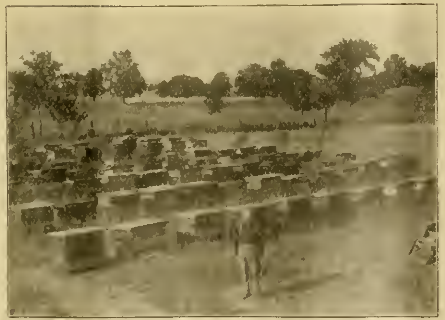
(See page 725.)



BLATT'S BEE-HOUSE IN SWITZERLAND.



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The above is a sample of the many requests we are receiving for bee-keepers. The graduates of our correspondence school are going to have such offers placed before them. Don't you think it worth while to take up the course at once, and be in line for a good position? We can still take a few students at the reduced price of $10.00 for the course.

Our course is not exclusively for those wishing a position, but for those intending to learn bee-keeping, and adding to their present income. Also for those who wish an interesting study. Write to-day, for our prospectus will give you full particulars.

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Don't forget that for October orders we allow six per cent. Our catalog prices will be the same in 1905 as this season, so don't wait for new catalog. Every month you do you lose one per cent. A little forethought will be a profitable investment.

Orders in Nov. 5 per cent.
Orders in Dec. 4 per cent.
Orders in Jan. 3 per cent.
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DANZ. HIVE

This hive is growing more and more popular as bee-keepers discover its advantages. You will not lose any thing and have much to gain by investigating it. A postal brings a copy of "Facts About Bees," telling all about the hive.

Fifty Per Cent Increase.

I have had a very successful year with the Danzenbaker hive. It gives me better satisfaction than any other hive for comb honey. I am confident it increases the honey by 50 per cent over the 8-frame hive.

Yours for continued prosperity,
JASON HOLLOPETER, Union Bridge, Md.
10-4-04.

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An "ad" in the Honey Column of Gleanings will put you in direct touch with honey-buyers. It will cost you only 20c a line, and may save you dollars in commissions in selling your crop. Give the column a trial. for we feel sure you will be pleased.

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An "ad" in Gleanings has brought me more inquiries and orders than I can fill. Give me credit for the amount until next year.

G. A. BLEECH, Jerome, Mich.
10-6-04.

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THE OLDEST BEE-PAPER IN AMERICA

Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

GEORGE W. YORK, Editor. CHICAGO, ILL., OCT. 27, 1904. Vol. XLIV—No. 43.

Editorial Notes and Comments

Educating the Public on Honey.

The fact is that only a small part of the population ever eats any honey from one year to another. We think the reason is, because they don't know its value as a food. Perhaps another reason is, on account of their having read that it is machine-made, and so they conclude that they don't want any.

But no matter why more people don't eat honey, the National Bee-Keepers' Association will soon begin a campaign of education, and try to do something toward familiarizing more of the consuming public with honey. Several honey circulars are to be issued for general distribution. The prospect is that the Department of Agriculture at Washington will issue a bulletin on the subject for free circulation.

It looks as if the time were near at hand when the demand for honey is to be increased to something near what it should be. When that time is come, there won't be enough honey produced to supply the calls for it. Then the price obtained by the producers will be higher, and bee-keeping will be more profitable.

In the honey-educating business, even bee-keepers can take an important part. Eat honey—and talk honey.

Appropriate Topics for Bee-Papers.

Editor Hutchinson, of the Bee-Keepers' Review, gives the following in his last number:

> At St. Louis I sat down near two bee-keepers who were having an earnest discussion. The first sentence that caught my ear was as follows:
>
> "I tell you, we don't care what his views are on the temperance question, and he has no right using space in his paper to air his views on the subject. We buy his paper for what it can tell us about bees, and not to learn its editor's views on temperance."
>
> The other man replied: "I don't agree with you. When a man owns and publishes a paper, he has a right to put into it what he pleases, and if we don't like it we needn't take his paper."
>
> "He has and he hasn't. As owner he has a right to run his paper as he pleases, but the subscriber has some rights, and when he sends his dollar for a bee-journal he doesn't want pages and pages used in discussing temperance, religion, gardening and automobiling," etc.
>
> I expected that he would include photography in the list, but he didn't, but, then, he hadn't seen this issue of the Review.

Perhaps a little comparison would help. We pay two cents for a Chicago daily newspaper. Over half of it doesn't interest us any, so we don't read that part at all. But what we do read is well worth the two cents we pay for the whole paper.

Another thing: Nearly every one these days sees a sample copy of the bee-paper before subscribing. So he knows just what to expect in future issues. Hardly seems the reasonable thing to kick afterward, does it?

We often think it's a good thing all people do not see everything just alike. If they did, and they thought as do *some* of our readers, all the other bee-papers would have to quit the field. Then, again, if all thought as do *some* of the readers of the other bee-papers *we* would have to shut up shop.

We believe we know all the bee-papers published in America, and think that every one is well worth many times the small price of the yearly subscription.

Stopping Comb-Honey Lies.

Even a disinterested listener must have noticed at the St. Louis convention of the National, that the uppermost topic in the minds of those present was how to combat the spread of the misrepresentations about comb honey in the newspaper and magazine press of the country. At nearly every session this subject would break out in some form or other.

The fact is, bee-keepers are getting exceedingly weary of seeing their fair product maligned by those who know nothing about it. And the prospect is that something effective will result from the action taken at the convention concerning this matter. We trust the National will continue to follow it up, and whenever a misstatement appears the General Manager will be notified, then he can get after it at once, and request a correction. If that is not forthcoming, then demand it. Finally, if nothing satisfactory can be had by either requesting or demanding, then threaten a suit in the courts. It is long past time for the published lies about comb honey to be ended. Bee-keepers need only to stand together, and it will be accomplished, we believe.

Attraction of Colors and Odors.

Just how far bees, in their search for sweets, are guided by colors and how far by odors, is an interesting if not a profitable question. It is easy to know that they are guided both by sight and scent. If they are working on a certain flower, and an artificial flower of the same appearance be placed among the genuine flowers, the artificial flower will be visited at least often enough to show that the bees are guided by the looks, for scent there is none. Look at the bees working on a linden tree when there is a breeze from the south. The bees will approach the tree on the north side and scarcely be seen on the south side. It might be supposed that the wind blows the bees to the north side, but the same thing takes place when the breeze is too slight to produce such an effect. In the fall, let honey be stored in a room having a screen door on the north and one on the south. When the wind is from the south the bees will gather at the north door, and when the wind is from the north they will gather at the south door, always gathering at the door whence the odor comes.

The following conclusions of J. Perez, as given in the "Experimental Station Record" of the Department of Agriculture at Washington, are in point, and are worth considering:

> Based upon extensive experiments and observations the author has reaffirmed his opinion expressed in 1894, that insects are not attracted to flowers by their color alone.
>
> After reviewing some recent literature regarding the attraction of insects by flowers, an account is given of observations on the attraction of various species of Bombus, Apis, Sphinx, etc., by plants growing under natural conditions, and of experiments carried on with flowers grown under conditions capable of control. As a result, it is concluded that insects are guided from a distance to masses of flowers by their perfume alone. Where flowers are grown singly, insects are attracted generally by color, and where the distance is small the odor also assists in attracting and directing the movements of the flying insects. In the case of apetalous flowers, the perfume alone is a directive agent.

The Proper Place to Keep Honey.

The time of year has come when honey, either extracted or comb, may be spoiled by being kept in the wrong place. Perhaps no bee-keeper need be told that honey should not be kept in a cellar, but the novice is in danger of something just about as bad. He does not keep his honey in the kitchen, because there is too much steam there, but in a room opening off from the kitchen, where there is no fire, hence no steam except the little that comes from the kitchen through the door which is much of the time open. If he will try some in each place he will find that the kitchen is the better place of the two.

Indeed a kitchen, even with all its steam, is not a bad place to keep honey. Steam, to be sure, but the fire overbalances the steam. The room adjoining is one of the worst places. Even if not so very much steam comes from the kitchen, the coldness of the room allows that little to be deposited upon the honey, and once deposited it stays there.

A place where salt will keep dry is likely to be a good place to keep honey.

Influence of the Size of Hives on Swarming.

G. M. Doolittle, in Gleanings in Bee-Culture, says that 9 Gallup frames, equal in capacity to about 6¾ Langstroth frames, are sufficient to entertain the best queen to her full capacity as to egg-laying. He says further, "with those 9-frame Gallup hives I have had fully as little swarming as I have had with the 10-frame Langstroth hives, and the average of the swarms was not materially different as to size in either case".

It would be interesting, and probably instructive, to hear Mr. Doolittle discuss this matter with C. P. Dadant.

Miscellaneous News Items

Nomination and Election of National Officers.—On this subject, Mr. C. P. Dadant, the present vice-president of the National Association, sends us the following:

Mr. Editor:—Reading your remarks in the editorial on page 692, prompts me to say something in regard to the same matter—the nominations and election of officers of the National Bee-Keepers' Association.

It is very important to have good officers, and to elect men who will thoroughly respond to the expectations of the majority of members.

The ruling of the Board, that nominations be called for and published previous to election, is a good measure, but I think it ceases to be good when it says that the two persons having the greatest number of votes shall be considered as the candidates for that office. If I am not mistaken this is the substance of the ruling.

The nominations in this way would give a fair idea of what the members want, if these nominations were spontaneous. But some persons may solicit nominations while others will allow them to come without solicitation. The one who writes his friends and asks them to nominate him will be easily nominated above others, and although 50 or 60 votes may thus come for one person, a very meritorious man may be left out, because he has not seen fit to do any electioneering, and has been nominated by only a half-dozen men who know his worth and want him elected.

I, therefore, believe that it would be better if the Board will remove from its ruling the condition of considering the two nominees having the most votes as the actual candidates. Let each one nominate the man he thinks fit for the office, and let these names be published in the way in which you published on page 692, for I was glad to see that not only the first two names, but also the other nominees, were given in the American Bee Journal, and I wish that the other bee-papers had followed the same course.

Although, perhaps, the views I express here will not be approved by all, I feel that I represent the wishes of a great number of members in making these remarks. I have talked with several about this matter, and especially with Dr. C. C. Miller, whose ideas on the subject concurred entirely with mine.

I am glad to see that there is no longer any strife in the Association. Our meeting in St. Louis was all that could be wished in the way of harmony. We must now maintain things in this condition, and try to be as fair to all as possible.

Our President refused to entertain a nomination at the St. Louis convention for the position of director, and I think he was entirely right. Had any one been nominated, at a time when no nominations were expected or in order, there would have been some feelings on the part of friends or other candidates whose names could not be thus brought to public notice in a report that is to be published. The decision of the Board to call for nominations by mail is the best thing for all, and if they will only remove the part calling for only two candidates, it will make everything more satisfactory.

What we must seek above all things is the avoidance of measures that will give occasion for dissatisfaction on the part of either the candidates or the voters.

Turning to another subject, I wish to congratulate you, Mr. Editor, on the stand you take concerning "Candor in Dealing with Customers", on the same page as the editorial referred to above. It is very important in our dealings with the public that there is no misunderstanding, and the man who knowingly allows any false impression to be formed is in a very poor way to take his own part when he is falsely accused.
Hancock Co., Ill.

We, too, are rejoiced that a more harmonious spirit is getting back into the Association. We trust it will be encouraged by every member doing only those things that will contribute to the success and better unification of all interests, rather than anything that might engender still further strife, or invite unfavorable criticism.

We wish to thank Mr. Dadant for writing as he has. He is always fair-minded, and seeks only to advance the best interests of the National Association and its members.

* * *

Mr. John Nydegger's Apiary, in Vermillion Co., Ill., is shown on the first page this week. When sending the pictures (of his apiary and Mr. Blatt's bee-house), he wrote:

I began in 1870 to keep bees in Berne, Switzerland. My hives were the so-called Burki hives, which are the most common in Switzerland. Later I tried the Blatt, which are the same as the Langstroth here, and also the Baden Vereinsmäss, the Gravenhorst "Bogenstulper" (a straw hive with curved top, which is turned over to take the frames out), and many others, but the Burki hive is the best, after all.

My hives were nearly all arranged for several colonies; three of them were arranged for 15. I had about 100 hives, and many of them on the side veranda of the house. These combination hives must be worked at from behind, which is somewhat slower, but the bees never get as angry as when they are approached from above. They are also cheaper and better for winter. Anybody who does not keep many bees should have only that kind.

In Switzerland, I had the Swiss bee-journal and the Eichstadter journal. In 1874 the Swiss bee-keepers' association, of which I was a member, went to Stassburg to the German-Austrian meeting, which was very interesting and instructive. There we saw all the great authorities, and talked to some. I also had a talk with Father Dzierzon.

In the Bernese Bee-Keepers' Association I was for many years treasurer.

In 1882 I went to Farmer City, Ill. I brought a large box of empty combs with me, and in the fall I had about 10 colonies. But as I was on a farm I did not have much time for bees.

Now I have about 50 colonies, the hives all facing south. They are all in the large, winter boxes, which are 3x28x26 inches. My present hives are again made according to the Burki system, only I have arranged them so that I can hang the sections in all the frames when I want to. The brood-frames are therefore 12¾ x8½ inside, and the upper ones 12¾x4¼. I can use all my frames for comb honey or for extracted. Extracted honey is the main thing with me.

I have again tried the Langstroth here, but I do not care for it any more. I have also made a box for 8 colonies, but have no bees in it yet.

I also send a picture of Blatt's bee-house, which has room for 360 hives, besides bedroom and workshop for himself. It is at Rheinfelden, Switzerland.

John Nydegger.

* * *

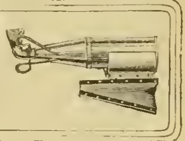
Mr. John H. Terens, whose picture appears on the first page, is thus written up by his friend, Mr. C. H. Voigt:

John H. Terens, a bee-keeper in Manitowoc Co., Wis., passed away July 20, 1904. He was born in Germany, Nov. 2. 1833, and came to this country with his parents in 1847. He learned the tinker's trade in Sheboygan, Wis., served as a soldier in the 27th Wisconsin Infantry, and passed several years in California. He was married in 1854 to Miss Annie Malone. In 1862 he settled in Mishicott, Wis., where he established a hardware business, of which he made a success. Some years ago he retired from business, putting up a nice little home near the village, in which he lived at the time of his death. The writer has known Mr. Terens for 30 years as a straight, honest, and upright man, and he was held in high esteem by those who knew him.

Mr. Terens was interested in bees as a boy, his father having kept bees in the old country, where he helped in the apiary. The bee-fever did not leave him, so when he settled down for himself he bought some bees, and kept them until his death.

Three years ago the writer and a friend called on Mr. Terens to get his opinion in regard to organizing a bee-keepers' association. He thought that was the very thing to do, and the result was that the Northeastern Wisconsin Bee-Keepers' Association was organized, of which he was the president from the start. At the last election he asked us to put in a president who had more get and push about him, but he was elected without a single dissenting vote, which shows in what high esteem he was held by his brother bee-keepers. Mr. Terens leaves a wife and two children—a son and a daughter. C. H. Voigt.

Proceedings of Conventions



Report of the Western Illinois Convention.

The Western Illinois Bee-Keepers' Association met Sept. 20, 1904, and there was a large attendance for so young an organization. We met with only one great disappointment, and that was the day was altogether too short. The county court-house is a fine, large structure, and the court-room a model place for a meeting, easily found by bee-keepers from a distance, and as we had a good attendance, the reporters of the daily papers were on hand and very anxious to get a good report.

Galesburg has two dailies, and the two reporters were each very anxious to outdo the other. We tried to aid them so as not to let them publish something injurious to the bee-industry, by giving them some points, but the articles they wrote themselves, and, considering they knew nothing of bees, they did pretty well.

We gave each reporter two nice sections of honey when the convention was over, to let them sample our products, for which they expressed themselves as very much pleased, and each agreed to send a sample of his paper free to each member of the Association—and they kept their promise.

A table was filled with samples of honey in several different kinds of sections, also extracted honey, and a large cake of beeswax; also fence separators, smokers, etc. I send a copy of the report as it appeared in the daily paper. Of course, a reporter likes to enlarge a little to make it interesting, but they appreciated the kind treatment and honey, and worked for our interest. Their reports appeared in the daily and weekly edition, and will consequently be read by several thousand consumers of honey. So you see if we are careful to aid the reporters at bee-conventions they have the power to do us lots of good. But, on the other hand, if we ignore them, and fail to give them some instruction, they may through ignorance of bee-knowledge do us much harm.

The honey leaflet, "Some Facts About Honey and Bees", has been republished by many papers, as members gave editors a leaflet and it was published in full by several papers that I have read. J. E. Johnson, *Pres.*

[The report of the convention as published in the Galesburg Evening Mail, reads as follows:—Editor.]

The second annual meeting of the Western Illinois Bee-Keepers' Association, held yesterday in the county court-room at the court-house, was a gratifying success to the members. The discussions were interesting and instructive, and the attendance was large, representatives being present from nearly every district within a radius of 30 miles of this city.

The interest in the Association is keen, and a long and healthy life is assured if one is to judge by the number who answered to roll-call. The Association, though organized only last fall, has grown with surprising rapidity, and has increased its membership threefold, a fact which is encouraging to the organizers and promoters, President J. E. Johnson and Secretary E. D. Woods.

The principal object of yesterday's sessions was to permit a free and thorough discussion of "Honey and Bees", and at both the morning and afternoon meetings ample food along these lines was presented for digestion. The proceedings of the morning session were chronicled yesterday, and the afternoon session was a continuation of the morning meeting.

NON PROFESSIONALS INJURE HONEY MARKETS.

The first matter taken up was that of non-professional bee-keepers putting honey in the market in a non-salable condition and selling it at low prices, thus injuring the trade. The statement was made that many farmers who keep only a few hives retain for their own use the best honey, and if there is a surplus the poor honey is marketed for whatever they can get. In most cases this honey is unfit for the table or for any use at all.

It was agreed that a campaign was to be entered upon by the members of the Association, by which they hope to educate the people in this matter, and in regard to the standing of the market. Also, to induce these farmers and others who sold such honey to produce and market only the best quality, thus insuring the public first-class goods, and fixing an universal price for the honey.

DRONE-COMB IN THE BROOD-CHAMBER—BEST HIVE.

The reading of the following question elicited no little discussion: "Should drone-comb be permitted in the brood-chamber of a colony of bees?" The majority took a negative stand, allowing the only condition as follows: That a little may be allowed in the two outside combs.

Another question was, "Which is the best hive to use for comb or extracted honey?" W. B. Moore maintained that the Danzenbaker hive was the best, advancing the argument that the brood-chamber permits of more sections above, and yet allows the same amount of space below, and, having closed-end frames, makes practically a double-walled hive for winter—features very much desired in a hive.

Pres. Johnson declared the divisible brood-chamber hive, for either comb or extracted honey, to be a superior hive, and one to be preferred, because it is much easier to manipulate, especially the supers and frame independently of each other; and also because it permits easier passage for the bees between the two sections of the brood-chamber. It was left to the members to decide for themselves which was best, as both are excellent hives.

REMOVING SURPLUS HONEY.

"How to remove the surplus honey from a colony of bees", was the next topic discussed. The use of bee-escapes seemed to be the choice of the majority of the bee-keepers, the exception being C. Wellbrock, who said he preferred to carry supers of honey into a dark room and allow the bees to escape through an open window.

A general discussion of these questions and other subjects of interest to the bee-keeper followed, after which the matter of where and when the Association should hold its next meeting was broached. It was decided to meet in this city again, the date chosen being the first Wednesday in April, 1905.

Many specimens of comb honey, extracted honey, and appliances used by bee-keepers were on exhibition. The honey industry is increasing with each year, as the bee-keepers find a ready market for their products at their own doors. Although many of the bee-keepers of the Association have from 5 to 200 colonies of bees, they are able to sell almost every bit of their honey in their immediate neighborhood, yet great quantities are shipped to Chicago, St. Louis, Kansas City, and to the smaller towns and cities.

There is a possibility of a honey famine this winter, as the yield was a poor one this year, hardly one-third of a crop. When it is taken into consideration that there will be little or no honey shipped East from California, where the honey crop is almost a total failure, the bees having died from starvation, and the wholesale dying of the bees in Wisconsin and Michigan, among the largest honey-producing States in the country, because of the severity of the winter, it is very probable that this report may be credited.

Within the jurisdiction of the Western Illinois Association there are bee-keepers who have many colonies of bees, and who make it a business to produce honey for market. C. Wellbrock reported having secured a crop of 2500 pounds of honey from 28 colonies, which is considered remarkable by the bee-keepers under the prevailing conditions.

J. E. Johnson has 66 colonies which yielded only 2200 pounds this season, which he states is about one-third the regular annual yield. Similar reports came from others of the bee-keepers, and of all Mr. Wellbrock is the only one who secured a good honey crop.

There are from 30 to 40 apiaries conducted by members of the Association, and the territory includes a great portion of western Illinois. Thus, it will be seen what may be accomplished by the Association.

During the meetings a number of new members were secured for the Association, including Dr. Neal, of Knox College, and a number of bee-keepers. Among those present were F. N. Johnson, U. G. Dickerson, Abner Reynolds, J. H. Moore, W. J. Radcliff, Geo. W. Cave, C. Wellbrock, W. B. Moore, J. E. Johnson, Louis Springer, J. N. Irwin, Arthur Bridge, Joseph Hillman, James Paden, F. E. Brooks, E. D. Woods, S. R. Sheeler, and a number of others.

Contributed Special Articles

Benefits of the National Association.

BY C. P. DADANT.

THE recent convention of the National Bee-Keepers' Association has shown us bettter than ever before the great advantages that the bee-keepers can expect to derive from a National Association, as soon as they support it in sufficient numbers to make it a power worthy of the pursuit. It is true that our numbers are now much greater than formerly, for we have existed for years with only the membership that could be brought together at one meeting each year. But we are as yet nothing to what we should be. Our membership should embrace the great majority of honey-producers throughout America. The 2000 members of the present day should number 20,000 within a few years. Things of great magnitude are not done in a single day, and we can not expect to reach this result at once, but we must put our best foot forward, and let all those interested in the pursuit understand that it is to our mutual interest to join hands.

The things that have been achieved are but few compared with what we can achieve sooner or later. But let me recapitulate what may be expected if our Association covers the entire bee-fraternity:

We have already protected members unjustly persecuted by cities or individuals, but it remains for us to protect all our members against fraud. The sale of anything but honey under the name of honey should be strictly prohibited, and we should see that this rule is enforced. On the other hand, we must enlighten the public as to the falsehood of asserting that comb honey can be, or has ever been, manufactured artificially. We can also protect our members, by allowing them to refer all their customers to the central headquarters in regard to the purity of their product, and tests which may be desired as to this, making the customer perfectly safe in his purchases.

Literature enlightening the public as to the value of honey, and as to the services rendered by the bees in Nature in the fertilization of flowers, can be best spread through our headquarters. This question of advertising our products and our bees under their real colors is not to be neglected.

But the greatest good that we may expect out of a union of all our forces is the formation of a business association which will undertake the sale of the bee-products on a large scale. When such a union is formed, the sale of honey and its price will no longer be controlled by the fluctuations of a more or less abnormal market, but by a wise regulation coming from the central management, which will be able to give a price at which honey should sell, by taking into consideration the amount produced and the probable demand. If a reasonable view is taken of markets and prices, comparing honey with other sweets, the producer will be able to secure a fair price for his goods.

The view which I take of this matter may be thought optimistic by some of the readers of the American Bee Journal, but it is based upon actual personal experience. The writer has, for 30 years, placed his price on his crop, and has usually obtained it. Yet there are dozens of bee-keepers on a small scale in my vicinity who have made it a custom to take their honey to the city and sell it for whatever price was offered them. The result has been that they have often accepted as low as 10 cents a pound for comb honey in fine sections, while I was able to secure this price on extracted honey. The isolated producer is at the mercy of purchasers when he does not inform himself as to the value of and demand for his product.

It is remarkable that the farmer is usually dependent upon the ideas of others for the prices that he may expect for what he raises, while he, being the sinew of the Republic, ought to regulate prices, or at least have a voice in this. It is easier for bee-keepers to unite on such a question because their numbers are less, and they are nearly all reading people who can be readily induced to join hands. Of course, in establishing regular prices, no unreasonable result must be expected. If we ask too much for what we have to sell there will be no sale. But how pleasant it would be for our bee-keepers, if they were able to refer to a central board, to inquire as to the prospective prices, and get a rational and well-substantiated reply to the question, “What shall I ask for my honey?” There is nothing impossible or optimistic in this expectation. Even if a central union could not handle all our honey—and I do not see any good reason for a negative—this union could at least inform each and every one of us of the amount of the crop in the country, and of the prices which we should expect to secure.

So each and every one of us should work to enlarge the membership of our National Association. We are lucky in being able to say that the present General Manager is the most active man that we could have selected. All who have had anything to do with Mr. N. E. France, by correspondence or otherwise, will testify that he has left nothing undone that could help the work. He has indefatigably replied to all inquiries, has gone wherever he has thought help was needed, and has carried our aims forward to the best of his ability. But he is very much underpaid. Most of his time during the past year has been spent in our behalf for the paltry salary of $100! I believe that I voice the sentiment of all who have had anything to do with him, in asking the Board of Directors to make an investigation and place the salary of the General Manager at a fair figure.

The Association has something like a thousand dollars in its treasury, and the next two years ought more than to double the annual income, if we understand our own interests.

It is evident that the world is ripe for co-operation in all lines. A sign of the times for us bee-keepers points itself in the act that the bee-keepers of Europe are themselves discussing the question of association. The French bee-journals for some time past have been replete with programs of federation, of union, of the bee-keepers associating in one body. This question seems in many instances paramount to the questions of methods of bee-culture.

Hamilton Co., Ill.

Bees and King-Birds and Other Birds.

BY J. P. BLUNK.

O “CLOVER BLOSSOM”, where are you? Here, let's shake ☞. Say, “Clover”, did you see what Mr. H. B. Terril has to say about king-birds on page 604? Will you wait here until I go out to convince him. I'll be back with him in a short time.

Good evening, Mr. Terril; I've called to see if we can come to some better conclusion in regard to the king-bird. I think you will find him a better citizen than you have pictured him in the American Bee Journal, as I find he bears acquaintance. While passing through the gun period it's an easy matter to trump up charges againt many living things. You say you have kept bees for 25 years, and still a-killing bee-birds! Well, I had to keep bees but a few years before I learned that this world was not created for bee-keepers alone and their bees. We have but a few birds now—what has become of them? Go ask the man and boy with the gun. When we were boys the birds were many. In those days our birds did our spraying of fruit-trees. Not so now, for there are too few of them. You accuse one red-bird of taking 85 bees at one feed. Did you ever count the bees you had crushed while putting on a super over a cross colony? Did you ever sit and look at the sight when the young bees were out for a play some pleasant afternoon, and conclude you could not spare a few for the birds, and by doing so not lessen the surplus, rather than take the life of one king-bird? I would keep an extra colony to even up matters. Surely, all living things enjoy life, and are put here for a purpose.

You say your father used to kill king-birds, which reminds me of my father, always killing bull-snakes when he could find them, while I consider the bull-snake the best cat on the farm. We sometimes outgrow our dad's ideas. The desire to kill is as old as the hills, and I sometimes fear that man will never outgrow it. You may wonder why I protect the bull-snake. He is a good mouser, and a much better ground-squirrel catcher, as he will go into their holes to catch them. I would rather furnish the king-bird a few bees than to replant the corn after the squirrel.

You also go loaded for the crow, which reminds me that I was raised in a crow country, and thought once as you do, until one day I went to a country where there were no crows, and did not see a crow until I returned to my native State, which was in the spring. The crows were returning, too, and I then thought I had never heard anything so pleasing to my ears. I stopped and listened to the din, which reminded me of home, mother, clay hills, and the old log canoe on the river bank. Since then I have liked the crow.

Last December I told the readers of the American Bee Journal how I thought I had misjudged the king-bird through my own blunders, by running hatching queens in dead colonies; that these run-ins had been killed in the hive by the bees, and not by the king-bird. So this season I operated in a different way by letting Nature take its course and hatch the queen in each colony, and then I lost 20 percent of young queens. King-birds, some one says. I say, No. I found where the blame lay. It was the old man's fault again, not the birds', for I never have seen so few king-birds as I did this season; I don't think there were to exceed three about the apiary during mating-time, so, of course, it could not be them.

I made a mistake when setting the hives close together and in straight rows. I lost 48 percent of my bees with spring dwindling. When swarming-time came I had two thin, scattering rows left. The hives of all dead colonies were removed, and the combs were placed in a rack under the trees. These combs I placed 2 inches apart in the rack to keep them from being bothered with the wax-worm, which it did, and a lot of combs hang there to-day free from all worms.

As fast as swarms came off I would place the old hive where one had died, and I got one row replaced again. The hives were just close enough to sit on one and work in the next, all facing the same way. When queens took mating-trips from the hives on the end of the rows they got back again and would soon be laying, while those that came from towards the center of the row, where they all looked alike—not a few of them were lost.

So now you see what an excellent opportunity that was to saddle the blame on the king-birds. There is a good bit of Adam in us all—I mean we men—we bird-killers—so when we can't lay the blame on the women-folks its natural in us to lay it somewhere, and poor King-bird is next in order, and gets it.

I want to make an impression on the beginners, that will knock all the killing of birds out of their heads. It's an easy matter to create a false impression on a beginner by the older ones saying, “King-birds are bee-catchers”, which will cause them to think so, too, and they get the gun ready, whereas if we try to tell them that birds, too, have a right in this world as well as bees, we may set a good example at least.

The other day I was talking with a bee-keeper about this same thing. Here's what he told me: He had some peas in the garden. A bird was seen among the peas a good share of the time. He thought, of course, the bird was eating the peas. The gun was handy, and the bird was shot. He opened the bird to see how many peas he had eaten. Well, he didn't find a pea, but he did find a curious looking bug, and a lot of them, too. He examined the pea-patch closely, and there he found the same kind of bugs, and a lot of them, too. He put the gun away, and told his wife that he would never kill another bird. He said he was ashamed to tell his mistake to his friends.

So let us be doubly sure before we kill one of the feathered tribe. The idea of us being so close-fisted about a few bees for a bird, when we have them by the thousands, yes, millions! Whatever we do, don't let us kill the birds, but hunt closely and see if it isn't possible to place the blame where it originated, as the writer did. I think if any person would examine the crop of a king-bird it would surprise him; you have no idea of the variety of insects it feeds on.

Now, "Clover Blossom", you watch East and I'll keep an eye on the West, and may be we can save the life of a bird or two. Webster Co., Iowa.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Ages of Bees that Go Out with a Swarm.

We are reading a book in our school called "Country Life and Agricultural Education". This book tells us that "The old queen and all bees old enough to fly go out to found a new colony". We do not think this. We think it is the young bees that swarm. What is your opinion on this subject? Anna Werno.

McHenry Co., Ill.

It's a nice thing that you can have such practical work in your school, but it's a pity you can't have books written by people who know what they are writing about. Let us talk it over a little.

Suppose a colony of people were to go from your town to make a settlement in some new part of the country. Do you think it would be a good plan for every one in the town over 12 to go to the new place, leaving no one in the town except the children and babies? Wouldn't do, would it? And it wouldn't do, either, for all the children and babies to go to the new place without any old folks along.

Well, now, it's the same way with the bees. Up to the time a worker-bee is about 16 days old it does no outside work—just housework, tending baby, cleaning up, building comb, and that sort of thing. After that it graduates into field-work, and the rest of its life spends its time bringing into the hive nectar, pollen, water, and propolis or bee-glue. If all bees old enough to fly—and a bee can fly when only a day or two old—should go with the swarm, there would be a sad state of affairs. There would be left in the hive hardly a bee old enough to do anything—indeed, hardly enough to keep each other warm—and the babies in the cells would be crying for drink, and nobody in the hive old enough to fly out for it.

If only young bees went with the swarm, there would be no one to bring in anything from the fields, and when the honey was used up that they brought in their sacs, they might starve. No, the Good Being that made the bees and all of us planned better than that.

If you will watch the bees that issue with a swarm, you will see some of them with ragged wings, veterans nearly worn out in the service, and all ages down to those that are barely able to fly. Indeed, some will come out too young to fly, and they'll just crawl around on the ground. And bees of all ages will be left in the old hive.

Neither is it strictly true in all cases that the *old* queen goes with the swarm. Sometimes she is not more than two or three days old, although the oldest in the hive. The old queen goes with the first or prime swarm, and a young queen goes with an afterswarm.

African Way of Offering Sample Tastes of Honey.

A good deal has been said at different times about various ways of selling honey, and especially as to allowing prospective customers to sample by tasting. Some use a wood-splint to be dipped in the honey, the splint to be thrown away after the handling. To avoid the possible suspicion that the splint may have been previously used, one bee-keeper keeps his splints in bulk, say a wooden separator, from which a fresh splint may be broken at each sampling. But honey-peddlers, in the heart of Africa, have a simpler way. The Delineator, with which most of the sisters are acquainted as a magazine giving instructions as to the latest style of making a gown or dressing the hair, has a very interesting article in the November number entitled, "The Woman Missionary Abroad". Among other things an account is given of the experience of one of the sisters, Mrs. Snyder, wife of a medical missionary "in the very heart of savage Africa".

After telling of negotiations with venders of different articles, involving much exchange of language, the account proceeds:

"The honey-man now comes forward, having amused himself while waiting by dipping straws in the pot and licking them. His clay jar is found to be full of a mixture of honey, water, dead bees, sticks, bark and comb. With a look of disgust the housekeeper tells him it is not fit to eat, whereupon, looking pained and surprised, he dips in two or three dirty fingers and then offers them to the lady to lick!"

A Tooth-Paste.

From the department headed, "The Woman Beautiful", in the Chicago Record-Herald, is clipped the following:

"Eight ounces of precipitated chalk, 4 ounces of powdered white castile soap, 4 ounces of powdered orris root, 40 drops of oil of sassafras, 80 drops of oil of bay. Honey sufficient to form a smooth paste."

As will be seen, any one of the sisters can make her own tooth-paste with little trouble, and be sure at the same time that she is putting nothing injurious into her mouth. It is not even necessary to have a paste so complicated. The essential elements of a good tooth-powder are the chalk and soap; the additional items may vary greatly, as they are merely for sweetening and flavoring. Adding to the powder glycerine or honey makes it a paste. A very satisfactory tooth-paste that has been in use for some time in our household is made in the following simple manner:

Two parts precipitated chalk, finest quality; one part imported white castile soap powdered or scraped fine; a few drops of oil of wintergreen; mix thoroughly with enough extracted honey to make a rather thick paste.

Beeswax Prevents Yellowness in White Fabrics.

"Hints for the Busy Housewife", in Success, gives the following:

"Beeswax, broken in pieces and put within the folds of white woolens and silks, will overcome the tendency to yellowness that white fabrics have when laid away for any length of time."

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we have used it ourselves.

Prices, prepaid—Sample copy free; 10 for 20 cts.; 25 for 40 cts.; 50 for 70 cts.; 100 for $1.25; 250 for $2.25; 500 for $4.00; 1000 for $7.50. Your business card printed free at the bottom of the front page, on all orders for 100 or more copies. Send all orders to the Bee Journal office

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses. By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

QUEEN-REARING WITH PARTIAL-LEGGED QUEENS.

When I think of the Broderick method of rearing queens, and the tangle we got into about it, this conundrum comes to me: Why should bees notice the partial loss of a leg so much more than they do the partial loss of two wings?

"FRETFUL CARES AND FEARS."

Another conundrum: Why should Mrs. Browning find bees at work, hay new mown, and corn being husked, all in the same "yesterday"? Well, she is English; and corn over on the other side is mostly wheat. I conjecture that "husking" in this case means husks striking together in the wind—a sort of fanciful variation of "rustling". No discount on the advice to throw away little fretful cares out in the fields with God—only most of us must work instead of idle while we are out there. Joyful circumstance—and handy nearly every day—that the remedy is just as good to those who work alone out in the fields as to those who go out there idly. Page 636.

POORLY-FILLED SECTIONS FOR BULK HONEY.

The suggestion, on page 639, that poorly-filled sections be cut out and sold as bulk comb—that should not be stretched too far. Some folks could easily be emboldened to use that way sections scarcely capped at all. If bulk comb has a good reputation for quality let's not do anything tending to damage the same.

VARIETIES OF BEES.

Yes, if there were 1877 more species of bee, each claiming to be the best bee, and any chance for doubts and dispute, we would indeed be in a sad scrape. Somebody sure to dispute wherever there's a chance. Lucky that all but a few of the multitudinous species of Northern bees are solitary and not social in habits. And of the few social species, luckily our bee is too far ahead of all, or nearly all, for any disputation. Perhaps if we should take in all the warm regions of the globe we should find that the social species of bees were not so few, after all. Lots of them—divided into a number of different genera: Apis, Melipona, Bombus, Trigona, and I know not how many others—wax-builders, paper-builders, mud-builders, combination-builders. Page 643.

BABY NUCLEI IN QUEEN-REARING.

Not a single laying queen from 150 of the baby nuclei is a rather slim experience for O. P. Hyde. From side lights, and front lights also, we may surmise that a little more care, and hopefulness, and zest put into the trial would have caused the loss to be somewhat less than total. We see among the Texans that to one failure several report success—or both success and failure. One man has a leather loop on the lid of his and *hangs it up*, "on the tree-top", *a la* the rock-a-by baby. But, by the way, I hardly see what it is that differentiates the present baby nuclei from the ones that were tried and abandoned a great many years ago. Also I fear that "success", so-called, would not exactly mean improved quality for our queens. You know when the new medicine only claims to be "just as good" as the old medicine, the probability is that the quality will be a little below. Page 645.

HONEY IN HIVES WHERE BEES DIED.

When honey is left in hives in which bees have died there are two different conditions that it may be left in. If in the fluid state, and the rest of the bees are allowed access to it, they will take it with a good deal of flurry and hurry, and the job will soon be finished—may or may not be a good plan. If it is pretty solidly granulated they will grub away at it more slowly, with the result that it will last longer—incidentally giving neighboring bees more chance to find out and get a large share. But the danger of putting mischief into their heads is less in this second case. Mrs. Wade's experience, on page 648, is instructive, in that she seems to have lost a pretty heavy share of the honey, and then got her pay back again unexpectedly in the increased number of wandering swarms that came and alighted by her apiary. This inclination of wandering swarms, that don't know what to do with themselves, to go to some apiary (only so as it's not their own) and alight, is not so well known as it might be. Three in one day, of this sort of gift horses, must be pretty near the record. I presume she is right in assuming that previous experience in grubbing honey there inclined them to come.

Ask Doctor Miller ??

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Queen Excluders and Swarming—Clarifying Honey—Biennial Requeening—Producing Extracted Honey—Winter Stores.

1. In running for extracted honey, using queen-excluders, will the bees be inclined to swarm as much as when running for comb honey without excluders?

2. In producing extracted honey, is it necessary to run it through a clarifier to make first-class honey? or will it be clear after standing in a honey-tank a few days? What do clarifiers cost?

3. Would you advise a beginner to requeen his colonies about every two years? or let the bees supersede their queens when they see fit?

4. Can a man handle the honey from 85 colonies with a 2-frame novice extractor during a heavy honey-flow?

5. If I tier up my extracting supers two or three high, should I make entrances in each super for the bees to go in and out? or can they do as much work by going in at the brood-chamber entrance?

6. If a colony requires 25 pounds of honey for winter with one extracting super left on, how much less can they winter on if the super is taken off in the fall? The super is the same size as the brood-chamber.

7. Are any of the bee-feeders advertised by supply-dealers patented?

8. Would it do to feed bees sugar syrup in the middle of the winter, where the temperature does not fall below 30 degrees?

California.

Answers.—1. No, the excluder will make no appreciable difference if there is room enough in the brood-chamber.

2. Except where honey is very thick, standing for a day or so in a tank is all that is necessary, the impurities all coming to the top. I don't know the cost of a clarifier, and worse than that, I don't know what a clarifier is. It is hardly likely that anything can do better work than passing

the honey through one or more thicknesses of some kind of cloth.

3. There may be localities, or certain plans of management, that make it advisable for the bee-keeper to take the matter in his own hands, but in general it is pretty safe to leave it to the bees. Perhaps in all cases it would be pretty well for the bee-keeper to interfere, if he would this: Leave all queens that have done better than the average, replacing the remainder with better stock.

4. Yes.

5. One entrance is all that is needed as an entrance. I don't know just how it may be in all localities, but in my locality I believe there is a very decided advantage, however, in having some kind of entrances to the upper stories when running for extracted honey. The bees will not use them as entrances, but they aid in ventilation, and have no little effect in keeping down swarming.

6. I don't know. In a mild climate it might not make any difference.

7. I am not sure that any one is patented.

8. Very likely it would answer fairly well. The question is not so much, "How cold is it?" as "How often do the bees fly?" If they fly every week the syrup would be all right, at least it would be all right to feed to supply actual needs, but harm might be done to feed in such a way as to stir up to unreasonable brood-rearing.

Moving Bees for Cellar-Wintering.

We packed our bees last fall on the summer stands, and lost about three-fifths of them. Hoping to avoid a repetition of the experience, we want to put about 25 colonies in the cellar. It is a high and dry cellar, and we have wintered one colony in it for two winters for experiment. They have come through in fine condition, dry and clean, and with but little loss of bees. This seems contrary to every one else, on account of the temperature, both times it having been cold enough for long periods to freeze apples good and hard. The bees are about 50 rods from the cellar.

1. Will it be practicable to move them this distance to the cellar?

2. Or would it be necessary to move them now near to the cellar, and not have to stir them up by the long ride just before cellaring?

3. The other 25 colonies must be moved the same distance before spring work begins. When will be the best time, now or later? OHIO.

ANSWERS.—1. Yes.

2. No, I'd make only one job of it, doing the moving as gently as possible, but they will stand quite a little stirring up without serious harm. Indeed, it would not be such a very hard job to carry them on a hand-barrow or stretcher that distance, carrying two colonies at a time, and that would stir them up scarcely more than a short distance.

3. Better late in the fall; but before they stop flying entirely.

Gorged Honey—Spring Feeding—Afterswarms—Uniting Colonies—Non-Swarming Apiary.

1. In many operations entailing the opening of the hive, we are recommended to make the bees gorge themselves with honey so they will not sting, etc. I want to know whether this honey that the bees fill themselves with must be reckoned as a total loss to the colony, or is any of this honey regurgitated by the bees and re-deposited in the cells again after the disturbance is over?

2. How much honey should 3 and 4-frame nuclei, in prosperous condition, have to winter on safely?

3. Do you recommend spring-feeding for stimulating purposes?

4. To prevent afterswarms, which is the better plan, hive the afterswarm temporarily in an ordinary hive, and as soon as you see the remaining queens in the parent colony killed and dragged out of the hive, run the afterswarm back into the hive it came from through an entrance-guard, thus catching their queen? or, as soon as piping is heard, open the hive and destroy all queen-cells found? Are either of them likely to prove successful? If not, why not?

5. Is it practical to unite a queenless, eggless, and broodless colony, with a colony having a laying queen, through a bee-escape?

6. (a) When should alsike clover be sowed here? (b) How much seed should be sowed per acre? (c) Should it be sowed by itself or with any other crop?

7. What would you consider the easiest plan to follow for a non-swarming apiary? I don't like "shook" swarms, or your putting-up plan, or your foundation-plan. Absolutely no increase desired, and as little interference as may be with the honey yield; shall be constantly in the apiary. VIRGINIA.

ANSWERS.—1. I can't say positively, but I think it will be found that most of the honey thus gorged will be returned to the cells.

2. If you mean that the 3 or 4 frames are covered with bees fairly, I should guess that there would be needed about three-fourths as much honey as a full colony would need under like conditions. It's the outside of the cluster that has to stand the cold and cause the consumption of stores, and there's the same amount of outside at the sides whether there be two frames or ten. Each additional frame makes additional exposure only at top, bottom and ends. So if a nucleus be half as large as a full colony, it will need a good deal more than half as much winter stores.

3. In some cases yes, in most cases no. If a colony is well supplied with stores, and if the bees are gathering at least a little, so that the queen lays enough to give the bees all the brood they can cover, nothing would be gained by trying to get her to lay more; and mischief might be done by the inexperienced feeding and getting the bees to fly at a time when they would be chilled and lost. But in some places there may come a time in spring with warm weather favorable for flying, but nothing yielding. Feeding then might be an absolute necessity to get the queen to laying.

4. The first plan ought to be entirely successful, and the second just as successful if you are sure to miss no cells.

5. Ought to be, but I don't know from experience.

6. (a) At the same time farmers in your locality sow red clover. (b) About four pounds. (c) Either way, a favorite way being to sow with oats. On rich ground, where the alsike would be likely to lodge badly in wet weather, a sprinkling of timothy may be good.

7. Oh, my! don't you think you're a little hard on me? You bar out pretty much all the ways I know, and then say, "Give us a better way." I've been groping after the answer to that conundrum for many years, and am still groping. But I can't be in the apiary all the time, and you make the thing easier by saying, "shall be constantly in the apiary." In that case the following might be submitted for your consideration: Have queens clipped. When a prime swarm issues, kill or remove the queen. Then prevent afterswarms by either of the ways you suggest in question 4.

"The Hum of the Bees in the Apple-Tree Bloom" is the name of the finest bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us *one new* yearly subscription to the American Bee Journal at $1.00.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get them subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last.

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PAGE & LYON MFG. CO., New London, Wis. U.S.A.

Reports and Experiences

Bees Did Well.

Bees did well this year. I started with one colony in the spring and increased to 8, taking off about 60 pounds of honey. The bees have a good supply of winter stores.

ALOIS BEITEL.

Platte Co., Nebr., Oct. 8.

A Correction in Average Yield.

On page 685 I am made to say that my surplus will be 3 pounds per colony, spring count. Of course this mistake was made by the printer. I can make a better showing than that. I have harvested nearly 1200 pounds from 34 colonies, and increased to 50.

G. STOUT.

Hennepin Co., Minn., Oct. 12.

[In this instance the mistake was not the printer's, but Mr. Stout's, as we printed it exactly as he wrote it. But we all make mistakes, sometimes.—EDITOR.]

Bees that are Hustlers.

I have what I think is a pretty good showing for a colony of bees. On June 28 I received from a dealer one pound of bees and one of his red-clover queens, and they filled a 10-frame brood-chamber solid full. The frames are 17½x9¼, and the super contained 28 one-pound sections. This is what I call hustling.

The American Bee Journal is one of my best friends, and I look forward to its coming with as much interest as I would that of an old friend

J. L. WELLMAN.

Stratford Co., N. H., Oct. 14.

Two "Swell" Encounters with the Bees.

My first experience with bees was when Gen. Sherman took me and a lot of others from Atlanta, Ga., down through that State, and a fine time we had. Before we got to Savannah we were rather short of rations, and had to do some jayhawing. One day we were out after something to eat, and came across a lot of bee-hives. Of course, we all wanted some honey, but none of us knew how to handle bees, and I tell you we were "done up" in great shape by them.

The next morning the Orderly Sergeant looked at me and said, "What are you doing here? Go to your regiment. What regiment do you belong to?" I told him I belonged to the 2d Iowa yesterday, and that I would like to stay with it. He said, "Is that you, Snider? Well, this is the worst case of poison-ivy I ever saw. Report to the doctor right off". I reported to the doctor, telling him what had hap-

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The Demand for Moore's Strain of Italians

was so great in July and August that he was compelled to withdraw his "ad." from the American Bee Journal, to keep from being overrun with orders; but he is now UP WITH ORDERS, and sending Queens BY RETURN MAIL, bred from his FAMOUS LONG-TONGUED RED-CLOVER STOCK, which has won a world-wide reputation for honey-gathering, hardiness, and gentleness. This is the same stock which W. Z. Hutchinson advertised for several years under the name of "SUPERIOR STOCK."

Prices: Untested Queens, 75c each; six, $4.00; dozen, $7.50. Select Untested. $1.00 each; six, $5.00; dozen, $9.00. Safe arrival and satisfaction guaranteed. Descriptive circular free.

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Every kitchen needs a knife sharpener. Every woman will appreciate the LIGHTNING KNIFE SHARPENER—a new kink for the kitchen. It's cheap, but it's nicely made and finished, and will wear well Puts a keen edge on the knife and saves the stovepipe. *Sample mailed for only three 2-cent stamps* Order at once—they are going like hot-cakes.

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	Price before July 1st.			After July 1st.		
	1	6	12	1	6	12
Untested	$ .75	$4.00	$7.50	$ .60	$3.25	$ 6.00
Select	1.00	5.00	9.00	.75	4.25	8.00
Tested.........	1.50	8.00	15.00	1.25	6.50	12.00
Select Tested..	2.00	10.00	18.00	1.50	8 00	15.00
Select Breeders						$3.00 each

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JOHN M. DAVIS, Spring Hill, Tenn.

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R. H. SCHMIDT CO., Sheboygan, Wis.
27A26t Please mention the Bee Journal

STRAWBERRY AND VEGETABLE DEALERS

The Passenger Department of the Illinois Central Railroad Company have recently issued a publication known as Circular No. 12, in which is described the

best territory in this country

for the growing of early strawberries and early vegetables. Every dealer in such products should address a postal card to the undersigned at DUBUQUE, IOWA, requesting a copy of "Circular No. 12."

J. F. MERRY, Asst. Gen'l Pass'r Agent.
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24A48t No. 75. Birmingham, Alabama.

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pened, and sent over some of the honey to the Sergeant. So I stayed with the regiment, and came home with it.

The second dose I had the past summer, when I got mixed up in a double swarm, and got it good, and no mistake. The next day one of my neighbors passed the house while I was standing at the gate. He looked at me and wanted to know what I was making a face at him for! I tried to tell him, but he got madder and madder, until my wife came out to explain matters. But I am not going to give up. I like honey too well.

This has not been a good season. I am old, but I am learning and willing to learn. The American Bee Journal is the thing to read if you want to be informed on bees. JOHN F. SNIDER.

Jackson Co., Iowa, Oct. 14.

Fair Yield of Honey—Demand Greater than Supply.

From 5 colonies I secured 311 pounds of surplus honey, of which I sold $41 worth at 20 cents per pound.

I wintered 12 colonies, which I increased to 23, and they are now in good condition for the coming winter.

I sell all of my honey to my shopmates. I couldn't supply all my orders this year, and think I could have sold 500 pounds if I had had it. I am in a good locality, and sell all I can spare.

C. A. MANGUS.

Blair Co., Pa., Oct. 3.

Peculiar Stinger—Season Not Very Good.

Enclosed find a peculiar bee-sting. By using a glass you will see that it has two parts.

We harvested about 9000 pounds of comb and extracted honey this season, and have about 150 colonies to put into winter quarters. We will pack about 100 in chaff-hives, and put about 50 into the cellar. Some of our honey is from basswood, but the most of it is from white clover, although we have a little dark honey from goldenrod and other flowers. The season was not any too good this year, but we hope next year will be better.

FRED BANKER.

Brown Co., Minn., Oct. 11.

[That stinger was a kind of bifurcated arrangement, and looks as if it might do double duty all at one time. A single-stingered bee is enough for us. Still, you might breed the double-stingered kind for bee-keepers whose apiaries are molested by mischievous boys.—EDITOR.]

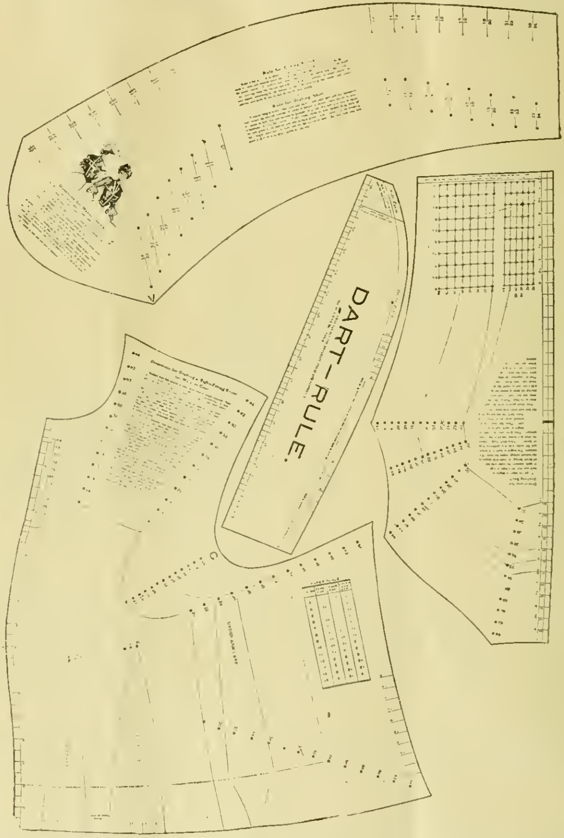
Wet and Cold Weather.

Bees have not done what was expected of them this season. It was too wet and cold in the spring, and I had quite a loss in spring dwindling. Those colonies that were strong and ready for the harvest did not do very well, although the fields were a white sheet of clover bloom. The bees did not work on it as I have seen them in other years. I think it was so wet and cold that there was very little nectar in the blossoms. The fall is no better. Fall bloom is good, but the bees could do nothing.

I am getting the bees ready for win-

Something FOR OUR Bee-Keeping Sisters in the Winter Time.

We think all ladies will agree with us in saying that every man should at least understand some business, with which, in case of necessity, he could support himself and family. The wealthiest people frequently come to want, and wretched, indeed, is the man who cannot earn a living after his wealth is gone. He sometimes fills the grave of a suicide. And why, in this enlightened age of progression, should not woman, as well as man, be able to depend on her own resources? In case her husband dies in poverty, must she starve or depend on charity? In case her husband fails to provide and grossly mistreats the woman he has sworn to cherish, must she humbly submit? A THOUSAND TIMES, NO! Let every woman, before she marries, have some knowledge that can be used to make her a living. Every mother, rich or poor, should make her daughters, in a certain degree, independent, by giving them some kind of a trade, and teaching them to be self-reliant. Mothers should have their daughters learn to sew, and not neglect this important part of their domestic education. The daughter so taught will not only make a better wife and mother, but will also be more likely to secure a better husband, and will always command his respect. He will not look upon her as a helpless "know-nothing," but will know that if he fails in his duties, she can live without him, and this can only strengthen the bond between them. A thorough knowledge of dressmaking can always be turned into gold, and become the means of support for the mother and her little ones. She may never have to use this knowledge in this way, but she has a trade and can use it if necessary.



The outline cut shown herewith is a condensed copy of THE NEW LONDON LADIES' TAILOR SYSTEM for drafting and cutting ladies' and children's garments. For simplicity and accuracy it has no superior among the more expensive systems. Thousands of girls have learned more about drafting and cutting with this system than they knew about it after serving their apprenticeship in some of the dressmaking shops of the United States and Canada. Thousands of the best garment cutters have laid their complicated and expensive system aside, and are now using THE NEW LONDON TAILOR SYSTEM. Thousands have been sold at $5.00 each, but we mail it Free to a paid-in-advance subscriber to the American Bee Journal for sending us two new subscribers at $1.00 each; or we will send it to any one with a year's subscription to the American Bee Journal, both for $1.75; or, we will mail the Tailor System alone for $1.00. Address all orders to

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334 Dearborn Street, CHICAGO, ILL.

ter, and although it is a little late I am giving them combs of honey. It can be done any time in the forepart of October, when the weather is warm enough for the bees to fly. This kind of feeding suits me best. I think bee-keepers ought to have combs ready in case they have to feed.

I have only about a third of a crop this season, figuring 50 pounds to the colony, spring count. If the clover is not winter-killed we may expect a good season next year. C. H. VOIGT.

Kewaunee Co., Wis., Oct. 10.

Fairly Successful Season—Loss of Bees Due to Spraying.

The season of 1904 is now drawing to a close. While the bee-keepers in our State enjoyed a fairly successful season last year, still, taking the entire State into consideration, this year has been the more prosperous. Some localities that suffered from grasshoppers and drouth last year have come out with an old-time honey-flow this season, while in a very few localities the bee-keepers have not done quite so well.

While there was a serious loss in bees this spring, those that lived through have done very well. I have investigated the trouble some, and I have come to the conclusion that it was a case of wholesale poisoning. From the best information obtainable it was caused by spraying the bloom. This pernicious work must be stopped.

E. S. LOVESY.

Salt Lake Co., Utah, Sept. 21.

Very Good Honey Crop.

Two weeks ago I took off the last super of honey, making 78 in all from 28 colonies. Those were all full of honey. Besides these I had a good many partly-filled sections. Of the 78 full supers 15 were extracting-supers, which will make an average of 30 pounds to the super. This gives me 2340 pounds of honey all told, and all colonies have enough to carry them through the winter.

The weather has been cloudy and threatening for more than a week, and it has been close and warm. There is plenty of wild-flower bloom, and the bees are still gathering nectar. We have not yet had any frost. The prospect was never better for a corn crop and other farm products.

W. IRVINE, SR.

Webster Co., Iowa, Sept. 30.

Advertising Helps to Sell Honey.

As I am now at the close of the honey harvest for this year I will give my experience. It may be of interest to some of other localities. I always like to read the reports and experiences of others, and compare them with my own.

This is my third season with the bees. Last fall I put 34 colonies into the cellar, and last spring I put the same number out on the summer stands. One of the number was weak, and was robbed shortly after, so I began the season with 33 colonies. I increased to 60, and took off 1414½ pounds of surplus comb honey. It was a poor season, as it was too cold and wet all summer, and they are unable to do anything this fall for the same rea-

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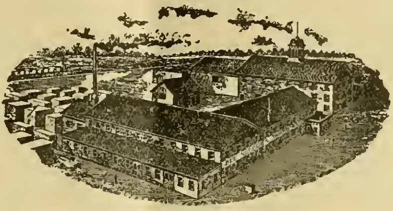

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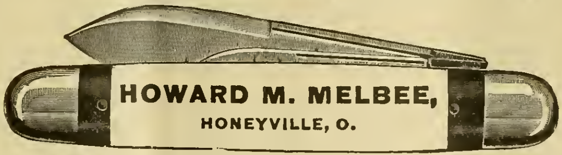
The Novelty Pocket=Knife.
Your Name and Address on one side—Three Bees on the other side.



[THIS CUT IS THE FULL SIZE OF THE KNIFE.]

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last-time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00.) We will club the Novelty Knife and the Bee Journal for one year, both for $2.00.

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THE MARSHFIELD MANUFACTURING CO., Marshfield, Wis.

CONVENTION NOTICES.

Connecticut.—The Connecticut Bee-Keepers' Association will hold their fall meeting at Hartford, in the Capitol building, room 50, Nov, 10, commencing at 10:30 a.m. There will be a question-box open to all. All bee-keepers are invited to attend, bringing friends with them and one or more questions that they would like discussed. There will be two or three papers by prominent bee-keepers. Please bring a sample of your this year's honey crop, or some apiarian fixture that you would like to show.
E. E. SMITH, Sec.
Watertown, Conn.

Illinois.—The Illinois State Bee-Keepers' Association will hold its 14th annual convention in Springfield, Tuesday and Wednesday, Nov. 15 and 16, 1904. On account of the I. O. O. F. the railroads of the State give reduced rates, notice of which will be made later herein. We expect to have a good program, and with a membership of more than a hundred we are expecting a larger attendance than ever before Come, and bring your neighbor bee-keeper—for the importance of this meeting will go a long way in securing the appropriation for continuance of the bee-keepers' law of this State.
Rt. 4, Springfield, Ill. JAS. A. STONE, Sec.

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Original Direct-Draft Bee-Smoker.
26 Years. BEST ON EARTH.
I think a few of the many letters I receive will interest you more than anything I could write. Of course you would like to know why Bingham Smokers go without puffing and smoke all the time and are always ready, FULL OF SMOKE and burn anything dryish and never go out just when you want smoke the most and quick. I have not room to tell all about them, but they DO ALL the above things to perfection. But what I wish to say is,
SEND FOR CIRCULAR
T. F. BINGHAM, Farwell, Mich.
BINGHAM CLEAN BEE SMOKER
Pat'd 1878, '82, '93 & 1903
DEAR SIR:—We have used and sold all the advertised smokers, but find none that suit us as well, or that find as much favor with our patrons as the Bingham smoker. They have no equal.
THE FRED W. MUTH CO., Cincinnati, Ohio.
May 19, 1904.

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son. I am now feeding them sugar syrup.

Last year I took off 1000 pounds of comb honey from 19 colonies, spring count.

I sold all of my honey around home this year, and could have sold more at $1.20 per 12-section case. Last year I shipped all of my honey, thinking that I could not dispose of it at home, but this year I put a small advertisement in our local newspaper, and then sent for 100 pamphlets on "Honey as a Health Food". distributing them among the farmers. Then I put up my honey in the up-to-date never-drip shipping-cases, put a few in the buggy, and sold and took orders for a number in a couple of hours. I was agreeably surprised to see how fast they went.

My intention is to keep 200 colonies, about 140 for comb honey, and the remainder for extracted. I have been thinking of getting a stamp with my name and address, etc., to stamp each section and case. Where can I purchase one?

About two weeks ago some one entered my yard during the night, got away with some honey from the supers, and even opened the brood-chamber and broke some of the comb. Has any one a plan for tracing such thieves?

I am town clerk of our township, and have a garden, my bees, and a horse and a cow, wherewith to make my living.
V. A. HANSON.
Polk Co., Wis., Sept. 23.

[The A. I. Root Co., Medina, Ohio, furnish all kinds of rubber stamps.—EDITOR.]

Fair Honey Crop—Banner Colony.

The bees in this locality have done fairly well. They will average about 60 pounds per colony, the most of which is basswood and smartweed, and hardly any white clover. We are having abundant rains this fall, which, I think, will give a good white clover crop next year.

June 11 I hived a swarm in an 8-frame hive, putting 3 supers on, and July 12 it had filled the 3 supers and the 8-frame hive when it swarmed again, the second swarm filling another 8-frame hive. From now on I shall rear my own queens, as they are as good as, or better than, those that are shipped to me from foreign countries.

I now have 10 colonies which I intend to winter in the cellar.
B. F. SCHMIDT.
Clayton Co, Iowa, Oct. 19.

Introducing Queens—Resume of the Years Gone By.

I think the most important thing for a bee-keeper is to have the right kind of a hive. The next thing to know how to handle the bees to save money, as everybody who goes into it expects to make money out of it. Then one should have the right kind of extractor and tools to work with.

To introduce a queen successfully, take the old queen out of the hive and put the new caged queen between two frames of brood, letting it stay there for two days. Then pull the card off the cage and stick on a little piece of comb in its place. The bees will eat it off, and the queen will be received all right. I have introduced as many as 50 in one day with this method, and have never had a failure.

I have been for over 40 years in the bee-business, and I always take the premiums at fairs, etc. I have lived here for 32 years. and began taking the American Bee Journal 35 years ago.

Since I have been here I have taken 890 pounds of extracted honey from a single colony, and another one I increased to 36 colonies in one season, from which I secured 1800 pounds of honey. I sold the bees for $8.00 per colony. From 125 colonies I have taken 15 tons of surplus honey, and from 100 colonies 12 tons, and have sold over 1600 pounds of beeswax.

I now have over 200 colonies, but this has been a very poor year for the bees in this locality.

The frames I use are 9x15 in the clear, and 9 frames to the hive, and

This Lightning **Lice Killing Machine** kills all lice and mites. No injury to birds or feathers. Handles any fowl, smallest chick to largest gobbler. Made in three sizes Pays for itself first season. Also *Lightning Lice Killing Powder, Poultry Bits, Lice Murder, etc.* We secure special low express rates. Catalog mailed free. Write for it.
CHAS. SCHILD CO.,
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Bee-Keepers, Attention
Are you going to buy Bees or Queens?
Are you going to locate in Texas?
We make a specialty of Queens, Nuclei and full Colonies of bees for shipment, in any quantity, any where, at all seasons of the year, car lots a specialty.
We are selling agents for a large number of colonies of bees, in quantity and locations to suit purchasers. If you wish to buy a farm or ranch we may have it for you. Write us your wants.
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We are Southwestern managers for the W. T. Falconer Mfg. Co., and will carry a full line of BEE-KEEPERS' SUPPLIES at Factory Prices. Beeswax bought and sold, and Honey Cans in season. Let us figure with you before buying. Order early and get the discounts.
The Hyde Bee-Supply Co.
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129 N. FLORES ST., SAN ANTONIO, TEX.
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NORTHERN KING QUEENS.
One Untested, 50 cts.; Tested, $1.00. Try one.
Address, B. F. SCHMIDT,
R. F. D. 1, NORTH BUENA VISTA,
43A1t Clayton Co., IOWA.

the hive and super are alike. I have them tiered up 7 stories high, and get a good deal of beeswax when I cut them down. DR. J. ARCHER.

Santa Barbara Co., Calif., Sept. 20.

Statement for 1904.

Apiary 14 colonies, spring count; 4 colonies, $9; 12 colonies, $12; hauling, 75 cents; foundation, 90 cents; paint and nails, 50 cents; sugar, 50 cents; one queen, $1; sections and foundation, $2.15; "A B C of Bee-Culture", $1.25; "Bees and Honey", 40 cents; paint, 35 cents; sections and foundation, $2.70; nails. 20 cents; 2 queens, $2; Bee Journal (6 months) 50 cents; total. $34.25.

Sold 12 pounds of beeswax at 25 cents per pound, $3; 175 pounds of comb honey at 25 cents per pound, $43.75; total, $46.75.

This leaves a difference of $12 50.

The season closed to-day. I hope to do better next season

W. C. EDGEWORTH.

Pulaski Co., Ark., Oct. 10.

WANTED.

Comb and Extracted Honey, at once; wholesale. State your lowest price for cash. Reference, Traders' National Bank.

I. A. BARTLETT, WEST MILFORD, W.VA.

43Atf Please mention the Bee Journal.

HONEY AND BEESWAX

When consigning, buying or selling, consult

R. A. BURNETT & CO.,

199 SOUTH WATER ST. CHICAGO, ILL.

Please mention Bee Journal when writing.

WANTED!

Fancy Comb Honey from White Clover,

in no-drip cases, at once. State your lowest price for **SPOT CASH**, the average weight of honey per comb, all definite and final in first letter. We answer mail and pay for goods promptly. Plenty of references if desired.

Beeswax Wanted for cash or trade.

C. M. SCOTT & CO.

1004 E. WASH. ST., INDIANAPOLIS, IND

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WANTED!

Comb and Extracted

HONEY

On Commission.

Boston pays good prices for a fancy article.

F. H. FARMER,

182 Friend St., BOSTON, MASS.

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WE SELL ROOT'S GOODS IN MICHIGAN

Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Beeswax Wanted for Cash.

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BELL BRANCH, WAYNE CO., MICH

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—FOR SALE—

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—WANTED—

FANCY COMB HONEY

In No-drip Shipping Cases.

Also AMBER EXTRACTED

In Barrels or Cans.

Quote your lowest price delivered here. WE REMIT PROMPTLY.

THE FRED W. MUTH CO.,

No. 51 WALNUT ST., CINCINNATI, OHIO.

Honey and Beeswax

OUR TOIL DOTH SWEETEN OTHERS

CHICAGO, Oct. 8—The receipts are now larger than the immediate requirements, but no material change in price is noticed. The best lots of white comb bring 13@14c, with lower grades ranging 1@3c less. Extracted, white, in cans and barrels, 6½@7½c; amber, 5½@6½c. Beeswax, 28@30c. R. A. BURNETT & CO.

KANSAS CITY, Sept. 22.—Market on comb honey is quite active at $2.75 per case for fancy white stock. Extracted rather slow at 6½@7c. We look for the demand on extracted to pick up considerably with cooler weather, Beeswax in good demand at 30c per pound.

C. C. CLEMONS & CO.

BOSTON, Oct. 11.—We quote our market for white comb honey from 16@18 cents; for No. 1, 14@16c. There is a good demand, and receipts are not excessive. Extracted honey wanted, with practically no stock on hand.

BLAKE, SCOTT & LEE.

NEW YORK, Oct. 8.—There are no new features in the honey market. White honey is arriving quite freely and meets with fair demand at 14@15c for fancy white, 13c for No. 1 white, and 11@12c for amber. Hardly any buckwheat has arrived as yet, and prices on same are not established. First grade of buckwheat honey will sell at from 10@11c. Extracted honey in good demand at unchanged prices. Beeswax market dull and declining.

HILDRETH & SEGELKEN.

ALBANY, N.Y., Oct. 11.—The honey market is steady here at 15c for best white comb, and 12½@13½c for buckwheat. The weather is cool and favorable. Extracted, white, 6½@7c—slow; buckwheat, 6@6½c. Beeswax, 28@30c.

H. R. WRIGHT.

CINCINNATI, Sept. 15.—There is an improvement in the honey market, so far as extracted honey is concerned. The demand has increased considerably, but the supply is limited, owing to the fact that bee-keepers in general are mistakably holding their crop for better prices. We quote amber extracted in barrels at 5¼@6c; white clover in barrels and cans at 7@8½c, according to quality. The comb honey situation is badly demoralized, being aught but encouraging. Quote fancy white clover comb honey at 14@15c. Beeswax, 26@28c.

THE FRED W. MUTH CO.

PHILADELPHIA, Oct. 8.—The honey market has been quite active in the last 10 days. Quite a good many arrivals. There seems to be a bigger diversity in range of prices than we have seen in this market for years. A number of shipments have been sent to commission men with instructions to clean them out at the best price. This has hardly made an established market price for any of the grades of comb. We quote: Fancy, 16@17 cents; No. 1, 14@15c; amber, 12c. Extracted, fancy white, 8c; No. 1, 7c; amber, 6½c. Beeswax selling freely at 28c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

SAN FRANCISCO, Oct. 12.—White comb, 1-lb. sections, 12½@13c; amber, 9@11c. Extracted, white, 6@6½ cents; light amber, 5@6c; amber, 4@4½c; dark amber, 3¼@3¾c. Beeswax, good to choice, light, 29@30c; dark, 27@28c.

There is not much choice to select water-white honey offering, and this sort is being very steadily held. Stocks of amber grades are of fair proportions and are not receiving much attention from any class of buyers.

CINCINNATI, O., Oct. 20.—Comb honey is now coming in more freely, and prices if anything have moderated a little. The sales made and prices obtained were for No. 1 fancy water-white comb, 13@15c; No. 2, 12½@14c. Extracted is sold as follows: White clover, in barrels, 6½ cents; in cans, 7¼@8c; amber, in barrels, 5¼@5½c; in cans, 6@6½c. Beeswax, 27c.

C. H. W. WEBER

DISCOUNT ALLOWED ON EARLY ORDERS FOR Bee Supplies

Let me SELL or BUY your

HONEY

If you have some to offer, mail sample with lowest price expected, delivered Cincinnati.

—IF IN NEED—

State quantity and kind wanted, and I will quote you price. I do business on the cash basis, in buying or selling.

Full stock of Bee-Supplies, the best made. Root's Goods at their factory prices. SEEDS of Honey-plants.

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(Monthly, 50c a year.)

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Address,

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Please mention Bee Journal when writing

No. 25 JARS, $5.25 a gross; with tin caps, $5.00 a gross. 1-lb. Square Jars, $5.00 a gross. Cat. of SUPPLIES free.

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This delightful 20-acre place situated at Griffin, Ga., is now for sale. 1000 feet above sea-level, affords a delightful climate. Especially suited for poultry, bees, and small fruit. Griffin is a manufacturing town of 8000, making a home market at high prices. Full particulars from owner.

H. E. WEED,
43A4t 1715 RAILWAY EXCHANGE, CHICAGO.

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Honey Packages of all kinds for marketing and shipping Honey. Fancy "no-drip" Shipping-Cases with glass in front and paper trays for holding drip; square flint-glass **Honey-Jars** with patent spring-top fasteners and glass stoppers; regular **Mason Fruit-Jars** nicely packed for shipping; **Tin Buckets**, all sizes; 5-gallon **Tin Cans** boxed 2 Cans in each box. EVERYTHING THE BEST.

Standard-Bred Queens

and everything necessary in the way of Supplies of all kinds for bee-keepers. DISCOUNT ON GOODS FOR NEXT YEAR'S USE.

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1004 E. Wash. St., INDIANAPOLIS, IND.

500 Colonies of Bees for sale, or exchange, for good securities. Abundant alfalfa range; no failures. Reason for selling, ill-health. Address,
DR. GEO. D. MITCHELL & CO., OGDEN, UTAH.
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Carry a complete stock of
G. B. LEWIS CO.'S
B-WARE
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Send us your orders and find out.
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Send name for our Catalog, Samples of Foundation and Veil Material.
We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies
OF ALL KINDS.

Langstroth on the Honey-Bee—Revised
The classic in Bee-Culture—Price, $1.20, by mail.

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MAKES THE FINEST

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American Bee Journal

OUR TOIL DOTH SWEETEN OTHERS

WEEKLY—$1.00 A YEAR.
Published by GEORGE W. YORK & CO., 334 Dearborn Street.

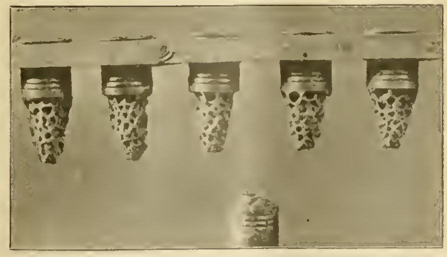
44th Year. CHICAGO, ILL., NOV. 3, 1904. No. 44.

* * *

APIARY OF B. F. ANDERSON, OF LOWNDES CO., ALA.
(See pages 740 and 741.)

P. F. ADELSBACH.

APIARY OF JOHN A. SAUER, OF KINGS CO., N. Y.



PART OF FRAME OF QUEEN-CELLS REARED BY C. M. DARROW.

For November

GLEANINGS IN BEE CULTURE.

Are you one of the 20,000 subscribers to Gleanings in Bee Culture? If you are not, there are many reasons why you should be. If you are a bee-keeper every number will be worth more than the subscription price. It is the most fully illustrated bee journal published. No medical or fake advertisements. Over one thousand pages annually. It contains the latest quotations from all the principal markets in the United States. The best bee-keepers contribute to every issue.

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7. Gleanings 1 year and Standard Corneil Smoker, postpaid, $1.85.
8. Gleanings 1 year and American Bee Journal 1 year, $1.60.

THE ROOT CORRESPONDENCE SCHOOL OF BEE CULTURE.

The demand for practical bee-keepers is greater that most people suppose. We are unable to supply the needs so started a correspondence school to fit any one to take advantage of these offers. We do it too at a very reasonable cost. The course also is of greatest value to beginners wishing to make bee-keeping pay, and for those studying bees for recreation. Prospectus giving full particulars will be sent on request.

"Schools of Correspondence are now teaching almost everything; in fact, I have often wondered that some one did not start a correspondence school for teaching bee-keeping, and now I see by an advertisement in the last issue of the Youth's Companion, that no less a firm than our old friends, the Roots, of Medina, Ohio, have done this very thing. I believe that no person or firm in this country is better fitted then they for making a success of such a venture, and I shall watch the outcome with much interest."—*The Bee-keepers' Review.*

"The A. I. Root Company, of Medina, Ohio, has established a correspondence school of bee culture. As this is one of the largest and best firms making bee-keepers' supplies, it is safe to say that its school will be first class in every respect."—*N. W. Agriculturist.*

GOODS AND DISCOUNTS.

The discount of our bee-supplies ordered in November for next seasons use is 5 per cent. A thrifty business man never fails to take advantage of this size discount. Why should a bee-keeper neglect such a matter? Catalog prices will remain same as this year.

December, 4 per cent.
January, 3 per cent.
February, 2 per cent.

AIKIN HONEY-BAGS.

Perhaps it is not yet too late to put your crop in these bags to sell. We have a good stock on hand, and can supply them promptly. Prices on application.

SIMPLEX HONEY-JARS.

This beautiful jar is meeting the approval of the honey seller. It costs no more than the older forms. Is a package that will show off your product to the best advantage, and places it beside the finest on the grocery shelves. A neat label helps. We priut them. Work up a home market, for they are the most paying.

CANS AND CASES.

We are shipping promptly anything in the line of honey cans and cases. A good stock of every thing needed at all branch houses. Write us direct for catalog or to any address below.

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ESTABLISHT IN 1861

AMERICAN BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

GEORGE W. YORK, Editor. CHICAGO, ILL., NOV. 3, 1904. Vol. XLIV—No. 44.

Editorial Notes and Comments

Making Honey Exhibits at Fairs.

On another page of this issue is a list of the premiums offered, and also their winners, at the Minnesota State Fair, held recently. We understand that it was the largest and best display ever made by the bee-keepers of that State. And it ought to have been a good one. For was not the total amount of cash premiums on apiarian exhibits the largest offered by any Fair in this country?

It seems to us that the Minnesota Fair managers have set a good pace, and their example should be held up before those who manage other Fairs, so that they may see what can be done by bee-keepers when they are given proper encouragement.

We congratulate Minnesota bee-keepers on their success. We hope they will continue to merit such generous treatment on the part of their State Fair officials. And we also trust that the already good-sized premium-list may be increased if possible, as we believe that the apiarian department of their Fair can be so encouraged that it will be the most attractive of all.

Choice of Directors of the National.

"It appears in the report of the Texas Bee-Keepers' convention that a card was received from General Manager France, notifying the Association that the term of the Texas Director would expire with the year, and asking them to appoint his successor, and that a successor was then and there elected. Has a new rule been promulgated, making that the proper order of procedure?"

So writes E. V. Pagan. There surely is some mistake in the case. No local or State bee-keepers' association has the right to elect any officer of the National, and Mr. France would hardly proceed in so irregular a manner. The election will take place in the near future by mail, all the members of the National having the opportunity to participate; and the successor to the Texas member may or may not be a Texas man; he will be the man who shall receive the highest number of votes for the place when the vote is counted.

Cost of Selling Honey on Commission.

Mr. E. D. Townsend says in the Bee-Keepers' Review:

"It is estimated, and I have never seen it contradicted, that if comb honey sold through the commission man brings 14 cents a pound, the freight, cartage, and commission will bring the net price down to about 10 cents a pound for the bee-keeper. Now we have some customers who will give us a cent a pound more than the regular quotations for our honey *on board the cars here*......The difference between 10c and 15c, or 50 percent on the deal, is worth looking after."

Certainly the 4 cents a pound is well worth looking after, and Mr. Townsend is to be congratulated that he can secure an extra cent because his customers can rely upon the goods. But there may be no harm in inquiring into the correctness of the estimate he gives, even if it may never have been contradicted. Given without qualification it certainly needs contradiction. Of the three items mentioned, cartage and commission are fixed quantities; freight is a variable quantity. If the distance be sufficiently great, the slice taken off the 14 cents may be a good deal more than 4 cents; if the distance be small may it not be less? Perhaps it might be well to obtain some definite and reliable information on the subject. We invite the commission honey-dealers to help us out in this.

Prices of Honey in England.

In the British Bee Journal D. M. M. reports that heather honey is scarce, and commands at retail 30 to 40 cents a pound. In the advertising columns of the same journal, sections are offered at 17½ cents each by one man, and at 15½ each by another; and pound jars of extracted are offered at 12½ cents each.

Candied Honey—A Suggestion.

Our Canadian cousins seem inclined to get names a little mixed. In the Canadian Bee Journal we are told, "Candied honey is made as follows", and then follow instructions for making what has been known for a long time under the name of "Scholz candy", "Good candy", and "queen candy". Candied honey is honey that has granulated, and in it there is nothing but honey; the mixture in question is mostly sugar, and to call it "candied honey" is to do the very thing against which we so bitterly object on the part of adulterators. Let us be consistent ourselves.

The Rapid Flight of Bees.

On another page, Mr. Allen Latham rather critically examines some experiments touching the flight of bees, the results of which have been published recently.

We have not personally made any tests, but we do not see why bees should not be able easily to fly at least 60 miles an hour. Why, the speed of a horse has been timed at the rate of a mile in about two minutes. Surely a bee can fly twice as fast as a horse can go.

But it would be interesting to have some bee-flying tests made at the experiment stations. Until we have something definite as to the greatest speed a bee can make in flying, we can all agree that an ordinarily healthy bee can fly quite fast enough—especially when it has succeeded in getting the prospective bee-keeper fairly on the run.

Sainfoin for Forage and Honey.

Much is said in the last Canadian Bee Journal about this plant, which seems to have value as a forage and honey plant, although sainfoin honey is not produced in marketable quantites. At the experimental farm is a plot of sainfoin that has been growing three years, another seven, which latter is getting very thin. Mr. Fixter says:

> "Here is the white clover plot, and may be you can count the bees, you can see five, six, eight or ten; you come to the alfalfa, and may be you do not see a bee at all, or may be one or two on the tops of the bloom; you come to the sainfoin, and you can count 100 bees in some spots where you would see eight or ten on the white clover."

If sainfoin, as a honey-plant, excels white, sweet, and alsike clover, it well deserves trial. Mr. Fixter speaks thus strongly of it:

> "The number of bees working on the sainfoin plots, against those working on white clover, alsike and bokhara clovers were quite noticeably in favor of the sainfoin. For fodder and as a fertilizer, it appears to be equal to alfalfa, and its habits and growth are very similar. The sainfoin being slightly finer in the stems, and having more of a stooling habit, will therefore make a much better pasture, especially for sheep."

Miscellaneous News Items

Chas. M. Darrow, of Vernon Co., Mo., wrote thus when sending the queen-cell picture appearing on the first page:

> I am sending the picture of some queen-cells which may interest some of the readers. I had intended to have the entire frame taken, containing 11 complete cells (hatched), and one (as shown on the lower bar) as they are prepared for grafting. But while taking them over to the photographer the comb got broken out of the lower part of the frame, so I decided to have only a part of it taken. So far as good queen-cells are concerned their equal never was.
>
> By the way, did any one ever try to hatch queen-bees out of shot-gun shells? Watch me.
>
> CHAS. M. DARROW.

* * *

The House-Apiary of John A. Sauer, of Kings, Co., Ohio, is shown on the first page. When sending the picture he wrote:

> I send a picture of my lath bee-house, built last spring. It is at the rear of the lot, 20 feet wide and 96 feet deep. The yard is only 20x35 feet. The bee-house is 8 feet high, with a roof to keep out the rain and the hot sun; 5 feet wide, and takes up the width of the lot. I have vines growing over the house, as I find it much better for the bees.
>
> I started keeping bees a year ago last April with 3 colonies, and lost one swarm about two months after. I took off 88 pounds of honey for the season, but sold 800 pounds the first year. This season I have taken off 97 pounds, and increased one, so now I have 4 colonies, and will get at least 100 pounds more of honey.
>
> It can be seen from the picture that I am getting crowded. There are buildings all around me. The population is 5000. I expect to go into the honey-business exclusively in a few years, and will then move to the country, so that I can have about 50 colonies. I like the work very much, even if I have been stung very badly several times.
>
> I get a great deal of valuable information from the American Bee Journal. JOHN A. SAUER.

* * *

The Apiary of B. F. Anderson appears by picture on the first page. He wrote us as follows Sept. 7:

> I am sending a picture of my out-apiary containing about 50 colonies, all in movable-frame hives. They are arranged in pairs, and set on benches 12 inches high and 12 feet apart each way. The picture was taken from the south side. The hives all face the east.
>
> The gentleman standing in the rear is a friend of mine; the boys in front are three of my little cousins, and the other "good-looking fellow" standing in front is myself. I had a frame of honey in my hands looking for a queen at the time the picture was taken.
>
> I have been studying "A B C of Bee-Culture" for two or three years, and I am also a subscriber to the American Bee Journal and Gleanings in Bee-Culture.
>
> I have been keeping bees for several years in box-hives, and did not know the advantage of movable-frame hives until the spring of 1902, when I purchased 10 1½-story dovetailed hives. Since that time I have been keeping them in such hives entirely.
>
> I have sold 2200 pounds of honey from my out-apiary, and will have about 800 or 1000 pounds more to sell.
>
> Lowndes Co., Ala. B. F. ANDERSON.

* * *

Some Facts About Honey and Bees.—This is the subject of an article written by Mr. J. E. Johnson, and published on pages 581–82 of the American Bee Journal for Aug. 25, 1904. We have republished it in 4-page leaflet form for general distribution, and furnish it, postpaid, at 35 cents per 100 copies. Send all orders to the office of the American Bee Journal.

* * *

An Explanation from W. Z. Hutchinson appears in Gleanings in Bee-Culture for Nov. 1. It seems that in August he sent out a circular letter to some of the members of the National Bee-Keepers' Association requesting them to vote for him as its next secretary. As would naturally be supposed, such action caused Mr. Hutchinson to be criticised, and especially when it was discovered that only a selected list had received his letter.

In view of the criticism, and after due consideration, Mr. Hutchinson wrote the explanation referred to above, in which he says, "I hereby withdraw my candidacy, and most urgently request my friends to cast their vote for some one else". We think the last is a wise move on the part of Mr. Hutchinson, and we trust his request will be heeded.

Referring to the matter of soliciting votes or nominations for officers in the National, one of our readers wrote us as follows recently:

> "We have a very good instance of this at present. The editor of the Bee-Keepers' Review lately sent out a circular to his friends asking for the nomination as secretary. Years ago he made a good secretary, and, no doubt, would be satisfactory, and has an undoubted right to make this request; yet this maneuver is giving him what I call an undue

advantage over others in the nomination. For instance, I have not the least doubt that if the editor of the American Bee Journal had followed the same course, the nominations would have stood between him and the editor of the Review, for, laying all flattery aside, the former was as good a secretary as the Association has had; and Mr. Brodbeck, being a modest man, would have been relegated to the third place."

The National Association has had internal troubles enough during the past two or three years without starting any more. The peaceful conditions that seem to be existing now should be encouraged rather than disturbed.

The Group Picture of the National Convention at St. Louis is now ready for delivery. It is quite a good photograph, considering that it was taken in a boiling noonday sunshine. It is mailed for 75 cents, by W. Z. Hutchinson, Flint, Mich.

Dr. Miller and His "Forty Years".—We have received the following item about Dr. Miller and his book:

EDITOR AMERICAN BEE JOURNAL:—

I received Dr. Miller's book, "Forty Years Among the Bees", and find it very interesting reading. It seems like sitting down with the Doctor and having a social chat with him about bees. Everything is stated so plainly, and in so friendly a manner, that one can not fail to be very much interested.

And, by the way, we have a near neighbor who is acquainted with the Doctor, and who attended school under his tuition years ago, at Marengo. His name is F. L. Sheldon, a very good neighbor and a worthy citizen. Mr. and Mrs. Sheldon often speak of the Doctor, and also of Miss Emma Wilson, in very high terms.

The American Bee Journal we consider a valuable paper. A. M. DEITZ.

Charlevoix Co., Mich., Oct. 26.

No doubt Dr. Miller turned out some good "boys" when he was teaching school. It is a pleasure to have such a testimony as the foregoing come in "after many years".

By the way, we mail Dr. Miller's "Forty Years Among the Bees" for $1.00; or with the American Bee Journal one year—both for 1.75.

Honey as a Health-Food.—This is a 16-page honey-pamphlet intended to help increase the demand for honey. The first part of it contains a short article on "Honey as Food", written by Dr. C. C. Miller. It tells where to keep honey, how to liquefy it, etc. The last part is devoted to "Honey-Cooking Recipes" and "Remedies Using Honey". It should be widely circulated by those selling honey. The more the people are educated on the value and uses of honey the more honey they will buy.

PRICES, prepaid—Sample copy for a two-cent stamp; 50 copies for 70 cts.; 100 for $1.25: 250 for $2.25; 500 for $4.00; or 1000 for $7.50. Your business card printed *free* at the bottom of the front page on all orders for 100 or more copies. Send all orders to the office of the American Bee Journal.

Sketches of Beedomites

HENRY L. MILLER.

We regret to announce that Henry L. Miller, a bee-keeper and bee-supply dealer at East St. Louis, Ill., died since the meeting of the National Association in St. Louis in September, where he was present. He was born 39 years ago in Illinois. He had been engaged in the bee-supply business for the past nine years. His illness continued 16 days, and was a complication of kidney trouble and typhoid fever. He was buried on the 12th anniversary of his marriage. In writing to us, Mrs. Miller says:

"You are a stranger to me, Mr. York, but I will say to you that if there were more men like Mr. Miller in their homes, or in their habits, there would be fewer unhappy homes. We have six children, the oldest 11 years, and will, with competent help, continue the bee-supply business at this place."

We were not intimately acquainted with Mr. Miller, but from the several times we had met him we formed a high opinion of him. He was very cordial at the St. Louis convention, and seemed to enjoy the meeting very much.

Mrs. Miller and her young family will have the sincerest sympathy of bee-keepers everywhere, in their great loss and bereavement.

P. F. ADELSBACH.

Of all men who have achieved prominence in the West during the last few years, relative to matters pertaining to the bee-business, no doubt P. F. Adelsbach, editor of the Western Bee Journal, published in Tulare Co., Calif., heads the list. He has become prominent not so much as a bee-keeper as a publisher. About a year ago he started his paper in the face of a record of defunct bee-papers that was fearful, yet he has built up a journal that bids fair to become one of the leading bee-papers in America.

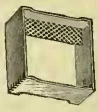
Mr. Adelsbach was born in Marquette, Mich., 30 years ago, of German parents. At an early age his parents removed to California. The boy grew to manhood under the golden skies of the West, and at the early age of 17 he embarked in business for himself in Fresno, Calif., where he conducted with the greatest success the leading photographic studio for over five years. By this time he decided that he wanted to see some of the world, and having shown much ability as an amateur actor, he now secured a permanent place and went on the stage. He continued in this capacity for only one season. He had formed a dislike for the associations of an actor's life, and hence refused to continue, even though he was eagerly sought to continue by the people with whom he had been.

He then returned to his home and secured a position as a reporter on a newspaper, and learned the printing business during odd times. During all this time his education was not neglected, for he soon afterward accepted a position in a business college, where he taught bookkeeping, shorthand and penmanship. About eight years ago he met with an accident from which he has never recovered, and has since been in delicate health. Soon after the accident he met the lady who is now his wife. She was Miss Annetta Snyder, of Selma, Calif. This brought him into a family of bee-keepers, and soon he had the worst kind of bee-fever. After a little time he had an apiary of his own, which he managed with his usual success. But his poor health would not permit him to continue the work, and so he disposed of the bees. He has to this day the keenest interest in bees, and is always studying them.

Physically, he is a mere mite of a man, with large blue eyes that penetrate one in an instant, and is very magnetic. He is a splendid speaker, having often raised his voice with telling effect against the liquor-traffic. The whiskey people all know him. He greatly prefers books to bipeds, and has little social tact. He is of a quiet temperament, but ferocious when antagonized. His sincerity of purpose makes him a man who is honored by all who know him.

Tulare Co., Calif. L. L. RUSSELL.

Contributed Special Articles



Flight of Bees—Experiments Examined.

BY ALLEN LATHAM.

THERE frequently appears in print some statement regarding the rapidity of the honey-bee's flight, but as yet I have never seen anything approaching satisfactory evidence which fixed the limit of the speed which bees attain. The problem is one difficult of solution, and almost any experiment devised to get at this rate of flight is so beset with difficulties that one is little wiser at the close of the experiment than at the beginning. Still, there are some facts that we all can observe, and from which we have the privilege of drawing our own conclusions.

Considering the difficulty besetting this problem, one is a little surprised at the boldness of the assertions to be found on page 629. The statement referred to relates to experiments tried by Mr. Philip Prior. I am surprised that the Editor allowed the statement to go unchallenged. I am unable to assert that bees do not fly 150 miles per hour, but I mean in this article to state a few facts which I think will lead most of my readers to doubt the truth of the observations of Mr. Prior. I believe for one, that more care should be shown in writing and in printing facts relating to bees. We ought not to blame the press in general for its comb-honey lies while we make such rash statements about the habits of bees.

I wish first to show that Mr. Prior's experiment is false on the face of it, not that I mean to say that Mr. Prior is untruthful—far from it—but that there were doubtless weak premises in the form of unreliable observation.

Mr. Prior floured bees, his assistant 2½ miles away watched for the same, each had a stop-watch agreeing perfectly in time; Mr. Prior watched for return of bees *full* of *Golden Gate Park* honey.

Let us ponder a moment. Flour was the only identification of the bee. Did Mr. Prior let one bee out, or two, or three, or many? If one, then his assistant had to see one bee in that vast park—had to see that bee with no loss of time, so that Mr. Prior could see it return after an absence of two minutes. (I wonder how many times Mr. Prior had to try this one-bee flouring before he and his assistant got satisfactory results.) Suppose two bees were let out. Then the assistant had to see both, or else the experiment was of no avail. Suppose many bees were floured (as was likely the case), then how was Mr. Prior to know that any particular bee had been to G. G. Park. Whatever the number of the bees let out, the assistant must see the first bee to get back. Well, well, I am getting all mixed up with those bees.

If any one wishes to try this simple experiment let him do so by all means, and find how easy and simple it is! The fact is that the experiment as tried is practically impossible. What chance is there that a single bee let out and floured will be immediately spotted by an observer in a great park? Even if a floury bee is seen, the proof is not there, for that bee may have been otherwise floured.

What sort of flowers grow in G. G. Park? Is it generally known that a bee uses up 40 seconds in filling herself with thin honey? This when the honey is all in one spot. Is a bee to consume no time in getting together the load of honey in G. G. Park? Let Mr. Prior's bees take the minimum of time and use 40 seconds. This will leave 1 minute and 20 seconds for the bees to cover the 5 (five) miles to and from the park. The rate of flight of Mr. Prior's bees is 225 miles per hour, not 150.

I think that I have shown the weakness of the experiment. I think that it was a shame that any credence should ever have been given the canard, more the shame that it should come from a school-teacher. Mr. Prior should have used more care, and should have eliminated the chances for error. What probably happened, is that floured bees were seen by the assistant; that Mr. Prior did see the same bee come back loaded after an absence of two minutes. But *that* bee had never been to Golden Gate Park and back. She had simply gone to the bees' watering-place and filled herself with water and returned, all in two minutes. We will believe the Prior story when Mr. Prior directs his assistant to feed the particular bee with a honey of special flavor, or else marks the same in some unmistakable way so that Mr. Prior will *know* that the bee has returned from the Park, and not from some other place.

Lest I take too much space I will now drop the Prior experiment and relate some of my own observations. These observations are free to the bone-picking of any and all of my readers.

It is my belief that bees can fly only a little over 50 miles per hour at the most, and that they are unable to fly even that fast when loaded.

Let any one take his place on a roof or other elevated position between an apiary and a field of buckwheat some morning. The bees will be passing by the thousands. Let the observer compare their flight with that of objects whose speed he knows. I venture to say that 30 miles an hour will satisfy most observers. The bees will seem to go about as fast as leaves blown by a gale, not so fast but one can see that they are honey-bees.

I have bees in my cottage at the beach. There are no trees within a mile. The wind has free sweep. Many a time have I studied the bees and the winds, and from those observations am forced to believe that bees find it difficult to fly over 30 miles an hour. Though the flowers may be secreting to their full capacity, a breeze of 20 miles causes the work to lag, and the bees appear very tired as they come back to their hives. When the wind gets up to 30 miles the work almost stops, only a few bees of possibly bolder or stronger flight continuing to seek honey. When the wind gets up to 40 miles no bee that wishes to get back to the hive leaves the same, for it is driven hopelessly away, and will tire itself out trying to beat back against the wind.

Right here I ought to say that when bees are about to alight they slacken their flight, and so might find it difficult to get to the entrance of the hive, though they might be able to fly right into the wind. But that this will account for only a few miles more of their speed I judge because of two hives whose entrances are amply sheltered from the prevailing wind. The bees from these hives continue work after the others have stopped, but they also stop when the wind gets over 30 miles.

The contents of the preceding paragraph will be clearer if one stops to think that a bee flying 50 miles per hour could just stand stationary if flying into a 50-mile gale. Bees flying 150 miles per hour would still go 100 miles an hour into a gale of 50 miles. If bees can make 100 miles an hour in the face of a 50-mile gale, it would seem that an ordinary sailing breeze would only serve to keep them cool in their exertions, and not tire them all out.

Let us approach the problem from another standpoint. The wing of the worker is ⅜ of an inch long. Its sweep in flight does not exceed ¼ of an inch on the average for tip, middle and base. Is it possible for the bee to move forward any faster than the backward sweep of the wings? Yes, a little, allowing for leverage. Probably not more than twice, to be generous. Well, then, how many times per second must a bee move her wings to make them move at the rate of 30 miles an hour, that is, to allow the bee's body to move forward 60 miles per hour? I figure that the bee's wings would have to vibrate 3872 times per second. The pitch of a note with a vibration number so large is very high, much higher than that of bees in ordinary flight.

Here is a chance for some painstaking observer, who has a good ear for sound, to find out approximately the true flight of the bee. At present it will be safer for us to put it not much above 30 miles per hour, at least until we have proof to the contrary New London Co., Conn.

The Rietsche Comb Foundation Press.

BY ADRIAN GETAZ.

THE statement has been made recently that there are in use in Germany 17,000 Rietsche comb foundation presses. I don't know how many are in France, Belgium, Switzerland, and elsewhere. There is a factory in France making them. These presses are made of metal similar to that used in making rollers. Rubber compounds, and hardened plasters and cements, are also used to a great extent, being cheaper than metal.

ADVANTAGES OF THE PRESS.

Why is it that so many European bee-keepers use such presses and make their own foundation instead of buying it? Several reasons are given.

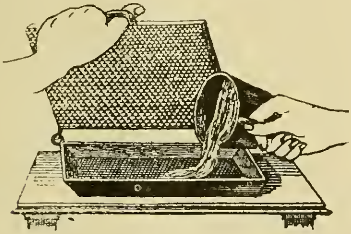
One is that the foundation sold by the large establishments is sometimes adulterated. The extent of this adulteration has been considerably exaggerated, and there are plenty of concerns selling pure wax foundation.

Another reason is the fear of introducing foul brood. Every now and then somebody reports that foul brood appeared in his apiary and no cause could be assigned to it, except that it was brought in with the foundation used. For my part, I do not see how the spores of foul brood, or any other living being, could survive the foundation-making process, yet I do not know positively. Furthermore, it is evidently best to be on the safe side.

SAVING HALF THE COST.

But the chief reason is, undoubtedly, the cheapness of the home-made foundation. The cost of foundation in Europe is about twice the price of the beeswax used. The cost of making it at home is insignificant. Almost every bee-keeper can make his foundation in a few winter evenings, when nothing else can be done. The process is very simple and very rapid. Open the press, pour in the wax, shut the press for a few seconds, then open it and take out the sheet of foundation. That's all. A lubricant should be applied now and then to prevent the wax from sticking.

The economy would be as great, or rather greater, here than there. The wholesale merchants here pay for the beeswax 23 cents per pound. I could get 28 cents in Cincinnati, but from this the freight and commission would have to be deducted. The foundation for sections costs from 55 to 60 cents a pound, according to the quantity wanted, to which the freight must be added. The railroads do not accept a package for less than the 100-pound rate; that is, if I buy say 10 pounds of foundation I have to pay as much for freight as if it were 100 pounds. Some of the northern lines, however, put the limit at 50 pounds instead of 100.


The Rietsche Press.

If I am caught by an unexpected honey-flow, and have to order by express, it is still worse. The express rates are simply exorbitant.

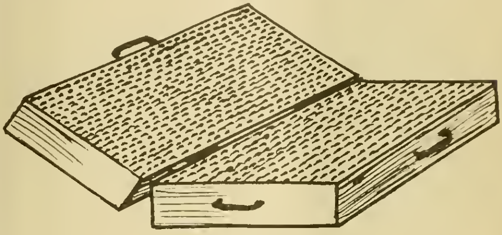
ARTIFICIAL STONE.

For several years I have been studying the question and experimenting. The first point in making the press is to determine what material to use. Metal is too costly; besides, the process of making would require some expensive machinery. On the whole, I do not think that a press made of metal could be sold for less than $12. Plaster is an entirely too weak material, and had to be abandoned entirely. Portland cement is perfect in every respect but one. Even the best brands contain some free magnesia. This dissolves in the water used as a lubricant, or part of the lubricant attacks the wax and forms with it a soapy compound which eventually makes a coat on the press to which the wax is liable to adhere in spite of any lubricant used.

After many trials, I finally found that a mixture of cement and other substances constituting one of the artificial stones recently introduced in the building business, gave much better results. A coat of special paint completes the protection against the magnesia. This press makes sheets 17x8½ inches. Different sizes can be made as well if preferred.

STRENGTH OF THE PRESS.

The foundation made on the press is usually rather brittle. This, however, can be remedied in a large measure, and entirely satisfactory results obtained. It must be remembered that wax shrinks considerably in cooling. If the sheet of foundation is left to cool in the press, the imprints of the press hold the sheet and prevent it from shrinking or contracting as a whole. So the contraction will take place everywhere, and cause innumerable very fine cracks. It is the presence of these cracks that renders the sheet so brittle. They can be seen by holding the sheet up to the light.


The Artificial-Stone Press.

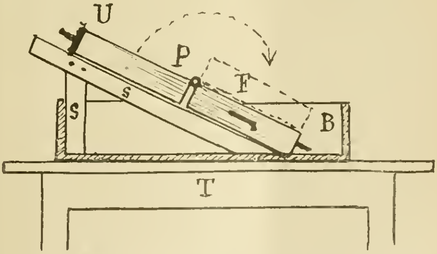
If the sheet is taken up when quite soft, the contraction will take place freely, and instead of cracking the sheet will contract as a whole. If the apiarist will put such foundation in the sections or brood-frames only in warm weather, or in a warm room, he will not be troubled by any excess of brittleness at all.

In order to meet these conditions it is necessary to make the foundation in a room quite warm. The warmer it is the better the foundation will be—90 degrees, or even 100 degrees, if the operator is willing to stand it. Of course, he is not expected to wear winter clothing.

THICKNESS OF PRESS FOUNDATION.

Another difficulty I met, was that the sheets were too thick for use in the sections. They would do very well for extracting and brood-nest combs, but that was all. Everything, every process that I could think of to make thin sheets was investigated, but found wanting until quite recently, when the idea struck me to put the press in an inclined position, so as to allow the surplus of wax to run off before the solidification takes place. Very simple thing, indeed. That is, after one has thought of it. It is like Columbus' egg.

It is necessary that the room where the sheeting is done, and the press itself, should be very warm, otherwise a thin sheet would solidify before the press could be closed.



Manner of Operating the Press.

Needless to say that the operator must be quick in pouring the wax in the press and closing it.

PROCESS OF MAKING.

In the above figure P is the press represented open. S a frame to support it. B a shallow box to catch the surplus wax and hold the press. T the table on which the whole is placed.

To make a sheet, pour the wax on the face F of the press, using only one hand, the other hand holding the upper part U, and closing the press as soon as the wax is poured in. The dotted lines show how the closing is done. The inside of the box and the outside of the press should be wet before beginning the operations, in order to prevent the surplus wax from sticking.

LUBRICANT FOR THE PRESS.

At this stage of operations we have a thin and soft sheet of foundation to take from the press. Needless to say that such a sheet will not stand any hard pulling, and in order to have it come off easily, a good lubricant should be used. The instructions given in the European bee-papers are to use water and honey, half and half, and apply after every fourth or fifth sheet. I find that there is quite a difference according to the quality or kind of honey and the temperature of the room and the press. The warmer these are the more honey should be used. I obtain better results by applying the lubricant often, and in small quantity rather than by doing the reverse. I suppose any cheap glucose syrup would do as well as honey. With me, a big sponge is the best instrument to apply the lubricant rapidly and uniformly.

SOFTNESS OF PRESS FOUNDATION.

The foundation from the press is thicker than the surplus foundation made by the Weed process, but is much softer. But let me say, first, that the difference in thickness is more apparent than real. The enormous pressure to which the Weed foundation is submitted reduces its volume perhaps to half what it otherwise would be, but it increases the hardness and toughness in proportion.

There is no doubt that the bees prefer the soft foundation, as they can work it more easily. Those of the old readers of this paper, who have kept their bee-papers, will find the discussions and reports on the use of the foundation from the Given press and the rollers, in the papers of ten or twelve years ago. The consensus of opinion was in favor of the press. My own experiments are too limited yet to be very conclusive. As far as I am able to judge now, the bees will take the soft foundation in preference. Furthermore, if the walls are not too high, they will thin the base of the cells of the soft foundation, but never those of the Weed foundation, probably because it is too hard. The walls will always be thinned and drawn, no matter how hard they may be; probably because the bees can get them between their mandibles and thus easily work them. So, after all, the excess of wax of the soft foundation is not lost at all. The transparency of the Weed foundation is merely a matter of looks, and need not be considered.

Knox Co., Tenn.

Minnesota State Fair and Premiums.

BY H. G. ACKLIN.

THE Minnesota State Fair, held Aug. 29 to Sept. 3, was the best one the State Agricultural Society has held, and one of the best State Fairs in the United States. The Minnesota bee-keepers did their share by putting up a larger exhibit than last year, not only in honey and bees, but canned fruit sweetened with honey, jams and marmalades sweetened with honey, cooking and baking sweetened with honey, and plain and sweet pickles put up with honey-vinegar. Cooking and baking, canned fruit, sweet and plain pickles all put up with honey and honey-vinegar have been exhibited for five or six years at our State Fair, and have done a good deal towards increasing the sale of honey and honey-vinegar. Many of the rich have asked for recipes for cooking, baking, and putting up pickles with honey and honey-vinegar.

Mr. Eugene Secor, of Iowa, was the judge of the apiarian exhibits, and the following is the

LIST OF EXHIBITS, WINNERS, AND AWARDS.

Case of Extracted amber honey. 12 pounds or more in glass, labeled—1st prem., J. B. Jardiue, $10; 2d, Moeser's Apiary, $6; 3d, H. G. Acklin, $4; 4th, Walter R. Ansell, $2.
Display of extracted honey from greatest number of flowers in glass, labeled—1st, H. G. Acklin, $5; 2d, J. B. Jardine. $3; 3d, Walter R. Ansell, $1.
Beeswax—best quality, 10 pounds or more—1st, H. G. Acklin, $5; 2d. J. B. Jardine, $4; 3d, Moeser's Apiary, $3; 4th, W. R. Ansell. $2.
Honey-vinegar—1st, H. G. Acklin, $4; 2d, Moeser's Apiary, $3; 3d, Walter R. Ansell, $2.
Best display of pies sweetened with honey—1st, H. G. Acklin, $4; 2d, Moeser's Apiary, $3; 3d, Walter R. Ansell, $2.
Best display of honey-cake—1st, H. G. Acklin, $4; 2d, Moeser's Apiary, $3; 3d, J. B. Jardine, $2.
Best and largest display of marmalades, jams and jellies put up with honey—1st, H. G. Acklin, $4; 2d, J. B. Jardine, $3; 3d, Moeser's Apiary, $2.
Largest and best display of plain pickles in honey-vinegar—1st, H. G. Acklin, $3; 2d, Moeser's Apiary, $2; 3d, J. B. Jardine, $1.
Largest and best display of sweet pickles put up with honey and honey-vinegar—1st, H. G. Acklin, $3; 2d, Moeser's Apiary, $2; J. B. Jardine, $1.
Largest and best display of variety of uses for honey—1st, H. G. Acklin, $4; 2d, Moeser's Apiary, $3; 3d, J. B. Jardine, $2.
Nucleus of golden yellow Italian bees and queen—1st. H. G. Acklin, $4; 2d, J. B. Jardine, $3.
Nucleus of dark or leather-colored Italian bees and queen—1st, H. G. Acklin, $4; 2d, Moeser's Apiary, $3; 3d, J. B. Jardine, $2; 4th, Walter R. Ansell, $1.
Case of white clover honey, 12 to 24 pounds—1st, H. G. Acklin, $10; 2d, Moeser's Apiary, $6; 3d, J. B. Jardine, $4; 3d, Walter R. Ansell, $2.
Case of basswood or linden comb honey—1st, Moeser's Apiary, $10; 2d, J. B. Jardine, $6; 3d, H. H. Heins, $4; 4th, H. G. Acklin, $2.
Case of other white comb honey—1st, Moeser's Apiary, $10; 2d, D. C. Hazelton, $6; 3d, Lindersmith, $4; 4th, J. B. Jardine, $2.
Case of amber comb honey—1st, Moeser's Apiary, $10; 2d, Walter R. Ansell, $6; 3d, J. B. Jardine, $4; 4th, H. G. Acklin, $2.
Case of extracted white clover honey, 12 pounds or more in glass, labeled—1st, G. A. Forgeson, $10; 2d, Moeser's Apiary, $6; 3d, J. B. Jardine, $4; 4th, H. G. Acklin, $2.
Case of extracted basswood or linden honey, 12 pounds or more, in glass, labeled—1st, J. B. Jardine, $10; 2d, H. G. Acklin, $6; 3d, H. H. Heins, $4; 4th, Walter R. Ansell, $2.
Case of other white extracted honey in glass, labeled—1st, J. B. Jardine, $10; 2d, H. G. Acklin, $6; 3d, Walter R. Ansell, $4; 4th, Moeser's Apiary, $2.
Most attractive display of comb honey—1st, Walter R. Ansell, $12; 2d, H. G. Acklin, $10; 3d, Moeser's Apiary, $7; 4th, H. H. Heins, $5.
Display of comb honey in extracting frames—1st, J. B. Jardine, $6; 2d. H. G. Acklin, $4; 3d, Walter R. Ansell, $2; 4th, Moeser's Apiary, $1.
Most attractive display of extracted honey—1st, Moeser's Apiary, $10; 2d, H. G. Acklin, $6; 3d, J. B. Jardine, $4; 4th, H. H. Heins, $2.
Display of extracted honey, granulated or candied—1st, Walter B. Ansell, $5; 2d, H. G. Acklin, $4; 3d, J. B. Jardine, $3; 4th, Moeser's Apiary, $2.
Grand sweepstakes—largest, best, and most attractive exhibit—1st, Walter R. Ansell, $12; 2d, H. G. Acklin, $10; 3d, Moeser's Apiary, $7; 4th, J. B. Jardine, $5.

I have been on the committee to revise our premium-list for a number of years, and while we do not get just what we would like, it is getting better every year. The Fair managers always have their say as well as the committee. Cooking, canning, and using honey-vinegar are more attractive to the average Fair visitor than the honey alone, especially to the ladies, and are doing a lot to get them to using honey. The premiums do not begin to pay, as most of the cooking is eaten up by the judges, managers, and a few others.

One serious objection to our getting more premiums is, when we ask for it the Secretary of the Fair turns to his records and finds that Minnesota is now giving a larger amount of premiums in the honey department than any other State Fair in the United States.

Ramsey Co., Minn.

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food", written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we have used it ourselves.

PRICES, prepaid—Sample copy free; 10 for 20 cts.; 25 for 40 cts.; 50 for 70 cts.; 100 for $1.25; 250 for $2.25; 500 for $4.00; 1000 for $7.50. Your business card printed free at the bottom of the front page, on all orders for 100 or more copies. Send all orders to the Bee Journal office.

* * *

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

What Has the Season Been, Sisters?

Now that the season is over, it would be nice to compare notes and learn what success the sisters have had during the past season. Tell us, dear sisters, just how you have succeeded, whether you got from each colony an average of 100 pounds, 50, or nothing at all. Tell us about any special item of interest. Let's bring our sewing, knitting, or fancy work, and sit down for a good, social chat.

Honey from Foul-Broody Colonies.

1. A short time ago I read in the American Bee Journal that a colony of bees might be lightly affected with foul brood for some time before detecting it. If honey from such a colony had been extracted and used for food, would it injure any one who had eaten it?

2. I see by a late paper that the bacteria in honey from an infected colony would not be killed if boiled for one hour. (I suppose this would be from a bad case.) And would give the disease to bees if fed back to them. What use could be made of such honey? Mrs. Russell.

Monroe Co., N. Y.

1. Foul brood, as you probably know, is caused by a microscopic plant—Bacillus alvei. If a single one of these plants, or one of its seeds (spores), be contained in honey, it will convey the disease just as truly as would a larger number; just as a single seed of a weed would foul a field of ground, although a larger number of seeds would more rapidly fill the ground with weeds. So you see it is not best to count too much on mild cases.

Now as to whether it is safe to eat such honey. Plants do not grow except in the right kind of soil. The soil that suits Bacillus alvei is found in the larvæ of bees. In the human stomach they will not grow; you need have no fear of it any more than you would be afraid if you should swallow an apple seed that an apple-tree would grow out of your mouth. Surplus honey stored by a foul-broody colony is just as nice and wholesome as that from healthy colonies, although it might be death to bees.

2. Foul brood might be given by honey from a very mild case after two hours boiling. Three hours is safer, and it is hardly advisable to use such honey at all for feeding bees. It isn't so much that it needs such a long time, as that there is danger that all parts of the honey have not been subjected to the same heat, and if a single spore should escape it could do the mischief. If the honey is clean there is no reason it should not be taken for table use. It could also be used for making vinegar. If extracted from foul-broody combs so as to be unfit for table use, it could be boiled long enough to make it safe, and then fed at a time of year when it would be all used in brood-rearing. Of course, it *might* do to boil it for two or three hours, but rather than take any sort of risk in such a serious matter, it would do no harm to boil it for four hours, reducing it with boiling water and *keeping it boiling all the time*.

Sisters Helping the Brethren.

C. W. Barnum says in Gleanings in Bee-Culture:

"My wife was induced to come out and help me in the apiary, partly for want of health and partly for her help; and the outdoor exercise has built her up so that she outweighs her husband at present."

If more of the sisters were to help the brethren it would be for their good in more ways than one, and probably for the happiness of their families, although some might not relish the thought of becoming the heftier member of the combination.

A Furniture Polish.

Many of the sisters polish their own furniture. Here is a recipe taken from the Chicago Record-Herald, by which you can make your own polish:

"To make a cheap and excellent furniture polish, take one ounce of white wax, one ounce of castile soap, half a pint of turpentine, two ounces of beeswax, half a pint of soft water. Dissolve the white wax and soap (which must both previously be cut in fine shavings) in the water on the stove, and dissolve the beeswax in the turpentine. When nearly cold mix these ingredients together and the polish will be ready for use."

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses. By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

HONEY AND SUGAR CHEMICALLY CONSIDERED.

It's a worthy chemical article that Adrian Getaz gives us on honey and sugar—but I'm afraid it also needs a few shots fired at it. For one thing he says, "Levulose does not crystallize at all". Then it would follow that such honey as they market in paper bags hasn't any levulose in it. That will hardly do. Less certainly wrong—but still it looks doubtful—if granulation sets in because, at the low temperature, water can not hold so much of the other ingredients. If that's correct, one would think that the heaviest, thickest honey would be the first to granulate—and it's the other way, I believe.

On the dextrose and levulose matter let me illustrate what I think. Here is beeswax—certainly looks like a simple, straight chemical; but it is now known to be a varying mixture of three different waxes. I prophesy with a good deal of confidence that the dextrose of honey will eventually be found to be a varying mixture of several different sugars—and the same of the levulose. I think the recognition of this fact will help us some in our puzzles, but probably not get us out of all of them.

He says the glucose of commerce, if pure, would be the same as the levulose of honey. Isn't "levulose" there a slip for dextrose? My memory may easily be at fault, but, if not, glucose is one of the dextroses. You see, if there were a thousand different sugars they would all *have to be* dextroses or levuloses, or neutrals. Dextrose means right, and levulose means left, referring to the way a beam of polarized light is twisted when it passes through. Naturally this test makes the list of sugars pretty short—and may range together things which are wide apart in quality.

We'll thank him for explaining how poison gets into glucose—and thence into the grocer's syrup. Made with sulphuric acid; and sulphuric acid has got down to such exceeding cheapness that it is too cheap to be made with commercial sulphur. Largely made by burning mineral pyrites, and some of the mineral has arsenic in it as well as sulphur. Lime takes the sulphuric acid out of the glucose; but lime won't take the arsenic out after it once gets in. Page 661.

DIFFERENCE BETWEEN YOUNG AND OLD BEES.

It is an interesting fact that page 659 gives us about young bees as distinguished from older ones. Many fine hairs right on the surface of the large compound eyes; while from the eyes of the old bees the hairs are missing—broken off, or at least gone somehow. We hardly expect to be told that they pull them out, either from their own eyes or their neighbors'. More likely the hairs get brittle and easily break off when the proper time comes for them to go. And the sweeping, cat-wash-her-face motion of the front legs often seen, may furnish sufficient means of breakage. I'll run the risk of a guess that young bees are not anywhere near blind, however—in fact, the editorial remark as good as proves it. Where do all these hairs go to? Rest of young bee's body also parts with quite a fleece of hair during the first 20 days of life—thousands of hairs for each bee, and multiplied by say 100,000 bees in the course of the season. Bottom of brood-chamber ought to be a good place to go wool-gathering. Is it not these shed hairs that give the cappings of the brood such a peculiar texture—neither exactly wax nor exactly anything else? I'll play that most of the shed hairs adhere slightly to the wax surfaces, and then the bees slightly scrape the surfaces over, getting a mixture of hair and wax, which a little kneading fits for use as brood-cappings. Leastwise we *know* that the lower edges of the combs get scraped away with the lapse of time. If we fit in comb it will gradually get gone, and the space above the bottom-bar will appear again.

SUDDEN EFFECTS OF BEE-STINGS.

The case of W. W. Shafer, on page 660, is a very extreme one—also an example of a rare turn or sudden change which, for aught we know, any one of us is liable to suffer. After having been pretty well inured to stings one suddenly becomes very susceptible to them, and continues so. The case of Langstroth and James Heddon were a little that way, I believe.

EARLY SPRING CLEANING OF HIVES.

Probably all right in Texas, but in the cold North I think harm instead of good is sometimes done by such vigorous spring cleaning as that per page 664—at least, there is such a thing as doing it too early. Makes the hive too drafty for the babies. Wait a bit. Wait till the extra-strong colonies have got the cleaning all done ahead of you; then clean the weaker ones.

Ask Doctor Miller ??

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Cucumber as a Honey-Plant.

What do you know of the cucumber as a honey-plant, and of the quality of the honey? MICHIGAN.

ANSWER.—For several years my bees have had the range of some 200 acres of cucumbers, but I confess I don't know positively much about the cucumber as a honey-plant. The fall yield is better than it was in previous years, but it is not certain how much of the increase is due to cucumbers, as other plants are in bloom at the same time. Neither do I know the quality of the honey; yet it can not be anything very bad in color or flavor. Can any one give any more definite information?

* * *

Extracting-Supers in Winter—Late Introduction of Queens.

Our honey season here is about closed for this year, although the bees, I notice, are storing nectar from some source—a thing I have never noticed before this late, and can not guess what plants are furnishing this nectar unless it be lespedesa, or Japan clover. The next move in order now is to arrange each hive for the winter, and that brings about the necessity of asking a few questions.

1. Is it best here to remove all supers and leave the colony in the brood-chamber through the winter?

2. If your answer is yes, then tell us how we are to get all that scattering honey out of the combs of the super, so as to house and protect the same till wanted again next spring?

3. I have uncapped honey in the supers to get the bees to carry it down, but is that the right thing to do? and how much at one time would be right to uncap?

4. When honey in supers is not capped, I know of no way to get the bees to carry it down only by outside feeding, which is not practicable for many reasons.

5. Will an 8-frame hive, Langstroth size, be sufficiently large to comfortably house a good-sized colony in the brood-chamber alone, and also supply honey enough through the winter?

6. Is there any way to save this scattering uncapped honey in the supers without extracting it?

7. If fed to the bees outside the hive, by piling up these supers some little way from the apiary, and letting the bees clean it up—would you recommend that?

8. Can such uncapped honey be kept through the winter here till needed next spring, if left in the combs and kept from bee-moth and other insects—ants, etc.?

9. Or would it be a better plan to extract this uncapped honey now, and feed it back if it becomes necessary?

10. After the queens cease to lay in the winter months, would it be a good time to introduce other queens, should one wish to requeen or Italianize his apiary? would the fact of their having no young brood to rear a queen out of, tend to simplify the introduction of a laying queen? MISSISSIPPI.

ANSWERS.—1. Most certainly, comb-honey supers should be removed to avoid spoiling sections, and it is probably better to remove extracting supers. I take it that you are speaking of extracting-supers.

2. As you say in No. 4 that outside feeding is not practicable, the only way left to be sure of getting all honey out is to extract.

3. Yes, that's all right if the bees will carry it down, and it doesn't matter just how much at a time is uncapped, only so it be uncapped as fast as the bees carry it down.

4. If I understand you rightly, the bees carry down when you uncap, but not that which has never been capped. The philosophy of the difference is probably this: When the bees find the honey freshly uncapped, it is not in shape to suit their notions of neatness, so they go to work cleaning up, and when they get under headway they continue till the honey is emptied; but the honey which has never been capped is just as the bees left it, and so needs no cleaning up. If you were to sprinkle these last combs with diluted honey the bees would clean it up, and it is quite possible that might start them to carrying down, the same as if you had uncapped it.

5. Yes, and no. It is large enough to contain the colony and abundance of stores; but the bees will not be so sure always to have abundant stores as they will in a larger hive, and those who use 8-frame hives must see to it that combs of sealed honey are given where lacking.

6 and 7. It is very doubtful that there is any better way than the one you mention in No. 7.

8. Uncapped honey will keep through the winter all right if kept in a place warm enough.

9. Either plan will answer, but it might be less trouble to keep it in the comb.

10. I've had no practical experience in the matter, but it is said that after the close of the season a queen may be successfully introduced. Other things being equal, the absence of brood that you mention would be favorable. It is also a time at which there could be no loss from a break in laying, as there would be at the beginning of the harvest.

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Reports and Experiences

Good Report and Good Prospects.

As the season is over for 1904, I will give a report of my honey crop. I have taken 1450 pounds this season, 77 pounds of which is extracted. My best colony gave me 152 pounds, and the average was 96 pounds per colony, spring count.

I had 15 colonies last spring, and have increased to 30, and they are in fine shape for winter. My bees are the red clover Italians.

This was a good season for honey in this locality, and there is a fine growth of young white clover which makes the prospect look good for next season.

H. M. GARNER.

Miller Co., Mo., Oct. 15.

Good Market for Chunk Honey.

Our bees have done fairly well this season, though some colonies did not store enough to take them through the winter. Others filled two-story hives full. I run mostly for chunk honey, as the farm and poultry take up too much of my time for working for section honey. Besides, it pays equally as well in our market to cut out the honey and sell it in quart, half-gallon, and three-quart pails, and by cutting only alternate combs it keeps the bees building all straight combs.

D. F. MARRS.

McLennan Co., Tex., Oct. 17.

Finding and Hiving a Swarm.

One Sunday last June I went out and sat down under a big tree. I had been sitting there perhaps two minutes when I looked up and saw bees thick as spatter in another tree.

Two weeks later I went out to see how my pets were. I sat down about 10:30 in the same place, and in five minutes they started to swarm! There I was. They came out and alighted on a nice little bush. Now, what would you have done? I will tell you what *I* did.

I went half a mile and brought a soap-box, came back, bees still there. I pulled grass and weeds "to beat the band". Then I set the box down, cut the limb, shook the bees off, and do you know they couldn't all get into the box? There I was. So I hunted till I found "the lady of the house", and put her up in the farthest corner.

Then I thought of a friend of mine

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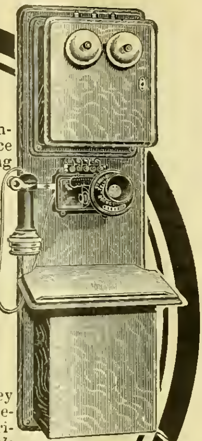

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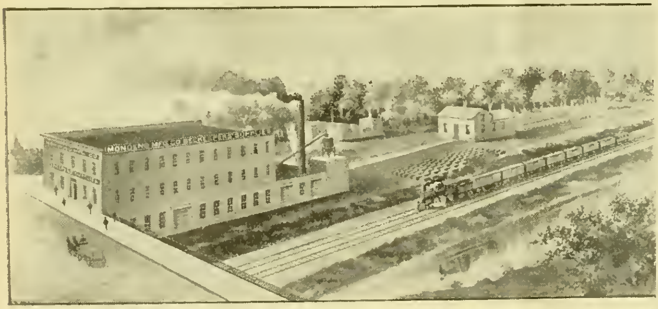

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who used to keep bees, so I started to run. He lived only two miles away, and the mercury stood 85° in the shade! So you see it was fun, to get over there and back with a bee-hive on the back, and all the people coming from church!

Well, I got back with the hive all right; it was nice and clean, but there I was—box full of bees, and a peck outside.

Well, I got ready, spit on my hands and went at it. I worked my knife under the cover, and pried it off, hunted till I found the queen again, took her and a handful of her friends, put them into the hive, scraped the bees off the box till I could get a hold, then shook them out in front of the hive—bare handed and all, mind—and

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got only two of the hot things stuck into me; but I didn't let them know I got any, or they might have given me more?—and that took nerve.

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Sweet Clover.

I have frequently in the past written about this plant, and some may consider that I am cranky on the subject, but I feel that it cannot be too highly praised as a honey plant. I stand up as a champion of sweet clover. Since it has become pretty well established around here I am very seldom bothered with robber-bees, for any great length of time. Before its introduction, there was a time nearly every season from about July 15 to Aug. 15, or later, when I dreaded to open a hive owing to the annoyance caused by robbers. If you have no sweet clover in your locality, introduce it and pay no attention to the kicks made by cranks. If I thought I was doing an injury to my neighbors by encouraging the spread of this plant I would not advocate its introduction. But I know that it is a benefit and not a scourge as some cranks are pleased to consider it. It takes the place along roads and waste-places formerly occupied by noxious weeds, and instead of impoverishing the soil it adds fertility to it.

When discussing this subject with my neighbors, if they are inclined to consider it a weed, I ask them: "Did you ever see it growing in a wheat-field? Did you ever see it growing in a corn-field? Did you ever see it growing in any field or ground that is properly and regularly cultivated?" To all these questions they are obliged to answer, no. They may, of course, see an occasional plant growing in a corn-field, but it is easily killed by proper cultivation. Many men who will allow

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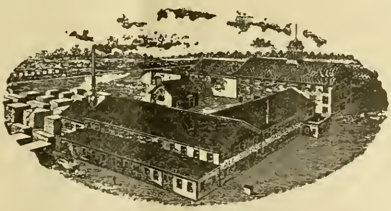

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cockle-burs to grow as high as their heads on their farms, will throw up their hands in holy horror at the sight of sweet clover. They seem to have a particular spite at it because it looks like good stock food; but livestock will not usually eat it unless taught, and to teach stock to eat it is more of a task than the average farmer is capable of. Sow sweet clover. Keep still about it and let the kickers kick.—Progressive Bee-Keeper.

Government Apicultural Work.

The years of quiet, steady, persistent, earnest work of Mr. Frank Benton in urging the Department of Agriculture to recognize apiculture, are at last bearing fruit. Heretofore the only experimenting that has been done, has been done with Mr. Benton's own bees, which has often interfered seriously with his crops of honey. Now there is to be a central, experiment apiary just across the Potomac on the Virginia shore, and sub-stations in different parts of the country—one at Chico, Calif., having already been decided upon. Two special agents in apiculture, who will assist Mr. Benton, have been appointed, one being our old friend John M. Rankin, who was once Inspector of Apiaries for this State, and the other a Mr. Leslie Martin, of Tennessee. There is also soon to be appointed an apicultural clerk. Aside from the experiments by which we may expect to profit, we may often find it profitable to thus have friends at court.—Bee-Keepers' Review.

Extracting Unripe Honey.

The bee-keeper who extracts green, raw honey for the market is a foe no less to be dreaded than the adulterator. Seeking a personal gain in quantity, a victim of his own ignorance, he deals himself the hardest blow; for while his own crop is not perceptibly increased, the quality is such as to preclude a second sale to a customer; and the tendency is to disgust those who might otherwise become habitual users of our product.—American Bee-Keeper.

Progress of Apiculture in France.

Mr. P. Noblecourt, writing to *L'Apiculteur* from a village in France, says, in showing how slowly improved methods gain a footing in some localities:

"At Aubencheul frame hives were not known [a short time ago]. During last winter I made four new ones which drew the attention of some friends who made some to transfer in in May. The harvest was good in our country. Bee-keepers here have always been in the barbarous habit of suffocating their bees to get the honey and take the wax, hence they could not profit by good years to build up their apiaries. In winter they saved but a few colonies in straw baskets or skeps. As for an apiary, none exists here except one at Villers, containing four Layens hives in a magnificent garden. I intend to make the new system known by giving and lending books and pamphlets treating on apiculture. Such is the progress (slow enough) that apiculture is making in our country".

That writer is a born missionary.—Gleanings in Bee-Culture.

CONVENTION NOTICES.

Illinois.—The Chicago-Northwestern Bee-Keepers' Association will hold its next annual meeting on Wednesday and Thursday, Nov. 30 and Dec. 1, 1904, in the Revere House, south-east corner of North Clark and Michigan Sts., Chicago. The prospects are that this convention will be the largest and best ever held by the Chicago-Northwestern. Prominent bee-keepers from a distance have said they were coming. It will be a great time. Everybody at all interested in bees or bee-keeping is urgently invited to be present. There will be live discussions of live subjects relating to bee-keeping. Come. It's Nov. 30 and Dec. 1. And Chicago is the place!

Park Ridge, Ill. HERMAN F. MOORE, Sec.

Connecticut.—The Connecticut Bee-Keepers' Association will hold their fall meeting at Hartford, in the Capitol building, room 50, Nov, 10, commencing at 10:30 a.m. There will be a question-box open to all. All bee-keepers are invited to attend, bringing friends with them and one or more questions that they would

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10 CENTS A YEAR.

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24A48t **No. 75. Birmingham, Alabama.**

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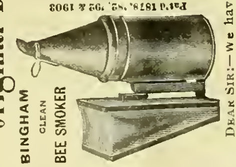

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I think a few of the many letters I receive will interest you more than anything I could write. Of course you would like to know why Bingham Smokers go without puffing and smoke all the time and are always ready, FULL OF SMOKE and burn anything dryish and never go out just when you want smoke the most and quick. I have not room to tell all about them, but they DO ALL the above things to perfection. But what I wish to say is,

SEND FOR CIRCULAR.

T. F. BINGHAM, Farwell, Mich.

DEAR SIR:—We have used and sold all the advertised smokers, but find none that suit us as well, or that find as much favor with our patrons as the Bingham smoker. They have no equal.

May 19, 1904. THE FRED W. MUTH CO., Cincinnati, Ohio.

Lightning Knife Sharpener!

Every kitchen needs a knife sharpener. Every woman will appreciate the LIGHTNING KNIFE SHARPENER—a new kink for the kitchen. It's cheap, but it's nicely made and finished, and will wear well Puts a keen edge on the knife and saves the stovepipe. *Sample mailed for only three 2-cent stamps* Order at once—they are going like hot-cakes.
Address, **LIGHTNING KNIFE SHARPENER CO.**
(Not incorporated)
534½ OGDEN AVE., CHICAGO ILL.

Mont. Vista.

This delightful 20-acre place situated at Griffin, Ga., is now for sale. 1000 feet above sea-level, affords a delightful climate. Especially suited for poultry, bees, and small fruit. Griffin is a manufacturing town of 8000, making a home market at high prices. Full particulars from owner.

H. E. WEED,
43A4t 1715 RAILWAY EXCHANGE, CHICAGO.

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Bee-Keepers Don't forget that we are the largest jobbers in the United States of *Root's Bee-Supplies, Johnson Incubators and Brooders, Humphrey's and Mann's Bone Cutters, Poultry Supplies of all kinds, Seeds and Implements.* Remember, you get these goods at Factory Prices, and save half the freight. Let us book your order for Golden Italian, Red Clover and Carniolan *Queens*; listed in our Catalog. Send for Free Illustrated Catalog.

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STRAWBERRY AND VEGETABLE DEALERS

The Passenger Department of the Illinois Central Railroad Company have recently issued a publication known as Circular No. 12, in which is described the

best territory in this country

for the growing of early strawberries and early vegetables. Every dealer in such products should address a postal card to the undersigned at **DUBUQUE, IOWA,** requesting a copy of "Circular No. 12."

J. F. MERRY, Asst. Gen'l Pass'r Agent.
32A15t Please mention the Bee Journal.

Marshfield Manufacturing Co.

Our specialty is making **SECTIONS,** and they are the best in the market. Wisconsin Basswood is the right kind for them. We have a full line of **BEE-SUPPLIES.** Write for FREE Illustrated Catalog and Price-List.

THE MARSHFIELD MANUFACTURING CO., Marshfield, Wis.

like discussed. There will be two or three papers by prominent bee-keepers. Please bring a sample of your this year's honey crop, or some apiarian fixture that you would like to show. E. E. SMITH, Sec.

Watertown, Conn.

Illinois.—The Illinois State Bee-Keepers' Association will hold its 14th annual convention in Springfield, Tuesday and Wednesday, Nov. 15 and 16, 1904. On account of the I. O. O. F. the railroads of the State give reduced rates, notice of which will be made later herein. We expect to have a good program, and with a membership of more than a hundred we are expecting a larger attendance than ever before. Come, and bring your neighbor bee-keeper—for the importance of this meeting will go a long way in securing the appropriation for continuance of the bee-keepers' law of this State.

Rt. 4, Springfield, Ill. JAS. A. STONE, Sec.

Pennsylvania.—The Pennsylvania State Bee-Keepers' Association will hold its fall convention in Harrisburg, Tuesday and Wednesday, Dec. 6 and 7, 1904. An excellent program has been arranged. Many subjects of vital interest will be ably presented. General Manager N.E. France, of the National Bee-Keepers' Association, will be present, as well as other prominent bee-keepers. Every bee-keeper in Pennsylvania should interest himself in this meeting. D. L. WOODS, Sec.

Muncy, Pa.

WANTED.

Comb and Extracted Honey, at once; wholesale. State your lowest price for cash. Reference, Traders' National Bank.

I. A. BARTLETT, WEST MILFORD, W.VA.

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HONEY AND BEESWAX

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Fancy Comb Honey from White Clover,

in no-drip cases, at once. State your lowest price for SPOT CASH, the average weight of honey per comb, all definite and final in first letter. We answer mail and pay for goods promptly. Plenty of references if desired.

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FANCY COMB HONEY

In No-drip Shipping Cases.

Also AMBER EXTRACTED

In Barrels or Cans.

Quote your lowest price delivered here. WE REMIT PROMPTLY.

THE FRED W. MUTH CO.,

No. 51 WALNUT ST., CINCINNATI, OHIO.

OUR TOIL DOTH SWEETEN OTHERS

Honey and Beeswax

CHICAGO, Oct. 24.—There is not an active market considering the season of year, prices are not strong and may sag in the absence of demand. No. 1 white comb honey, 12½@13c; fancy clover, 14c, with corresponding grades 1@3c less. Extracted, white, 6½@7½c; amber, 6@6½c, according to kind, flavor, quality and package. Beeswax, 30c.

R. A. BURNETT & CO.

KANSAS CITY, Sept. 22.—Market on comb honey is quite active at $2.75 per case for fancy white stock. Extracted rather slow at 6½@7c. We look for the demand on extracted to pick up considerably with cooler weather, Beeswax in good demand at 30c per pound.

C. C. CLEMONS & CO.

BOSTON, Oct. 24.—We are pleased to note an increased demand for honey, which with comparatively speaking, light receipts, makes prices firm. We quote fancy white, 16@17c; No. 1, 16c; with but little No. 2 on hand or to be had. Extracted, light amber, 7@8c.

BLAKE, SCOTT & LEE.

NEW YORK, Oct. 8.—There are no new features in the honey market. White honey is arriving quite freely and meets with fair demand at 14@15c for fancy white, 13c for No. 1 white, and 11@12c for amber. Hardly any buckwheat has arrived as yet, and prices on same are not established. First grade of buckwheat honey will sell at from 10@11c. Extracted honey in good demand at unchanged prices. Beeswax market dull and declining.

HILDRETH & SEGELKEN.

CINCINNATI, Oct. 28.—There is a marked improvement in the demand for comb honey since our last quotations. No material change in the extracted-honey market. We continue to quote white clover extracted honey in barrels and cans at 7@8½ cents; amber in barrels, 5¼@6c. Fancy white clover comb honey, 14@15c. Beeswax, 28c.

THE FRED W. MUTH CO.

ALBANY, N.Y., Oct. 11.—The honey market is steady here at 15c for best white comb, and 12½@13½c for buckwheat. The weather is cool and favorable. Extracted, white, 6½@7c—slow; buckwheat, 6@6½c. Beeswax, 28@30c.

H. R. WRIGHT.

PHILADELPHIA, Oct. 25.—Shipments have been quite heavy in the last two weeks. Prices are a little weaker in consequence, although fancy honey maintains a good price. We find the shortage is always in the fancy goods, and the off goods are what overstocks the market. We quote some sales: Fancy white comb, 16@17c; No. 1, 14c; amber and No. 2, 12@13c. Extracted, white, 8c; amber, 6@7c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

SAN FRANCISCO, Oct. 12.—White comb, 1-lb. sections, 12½@13c; amber, 9@11c. Extracted, white, 6@6½ cents; light amber, 5@6c; amber, 4@4½c; dark amber, 3¼@3¾c. Beeswax, good to choice, light, 29@30c; dark, 27@28c.

There is not much choice to select water-white honey offering, and this sort is being very steadily held. Stocks of amber grades are of fair proportions and are not receiving much attention from any class of buyers.

CINCINNATI, O., Oct. 20.—Comb honey is now coming in more freely, and prices if anything have moderated a little. The sales made and prices obtained were for No. 1 fancy water-white comb, 13@15c; No. 2, 12½@14c. Extracted is sold as follows: White clover, in barrels, 6½ cents; in cans, 7½@8c; amber, in barrels, 5¼@5½c; in cans, 6@6½c. Beeswax, 27c.

C. H. W. WEBER

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Bee Supplies

Let me SELL or BUY your

HONEY

If you have some to offer, mail sample with lowest price expected, delivered Cincinnati.

—IF IN NEED—

State quantity and kind wanted, and I will quote you price. I do business on the cash basis, in buying or selling.

Full stock of Bee-Supplies, the best made. Root's Goods at their factory prices. SEEDS of Honey-plants.

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JAMESTOWN, N. Y.

W. M. Gerrish, Epping, N. H., carries a full line of our goods at Catalog prices. Order of him and save the freight.

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No. 25 JARS, $5.25 a gross; with tin caps, $5.00 a gross. 1-lb. Square Jars, $5.00 a gross. Cat. of SUPPLIES free.

I. J. STRINGHAM,
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Goods in Season.

Honey-Packages of all kinds for marketing and shipping Honey. Fancy "no-drip" **Shipping-Cases** with glass in front and paper trays for holding drip; square flint-glass **Honey-Jars** with patent spring-top fasteners and glass stoppers; regular **Mason Fruit-Jars** nicely packed for shipping; **Tin Buckets**, all sizes; 5-gallon **Tin Cans** boxed 2 Cans in each box. EVERYTHING THE BEST.

Standard-Bred Queens

and everything necessary in the way of Supplies of all kinds for bee-keepers. DISCOUNT ON GOODS FOR NEXT YEAR'S USE.

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Engravings For Sale

We are accumulating quite a stock of engravings that have been used in the American Bee Journal. No doubt many of them could be used again by bee-keepers in their local newspapers, on their stationery, or in other ways. Also, if we can sell some of them it would help us to pay for others that we are constantly having made and using in our columns. If there is any of our engravings that any one would like to have, just let us know and we will quote a very low price, postpaid. Address,

GEORGE W. YORK & CO.
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Why does it sell so well? Because it has always given better satisfaction than any other. Because in 26 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material.
We sell the best Veils, cotton or silk.

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Langstroth on the Honey-Bee—Revised
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

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MAKES THE FINEST

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American Bee Journal

OUR TOIL DOTH SWEETEN OTHERS

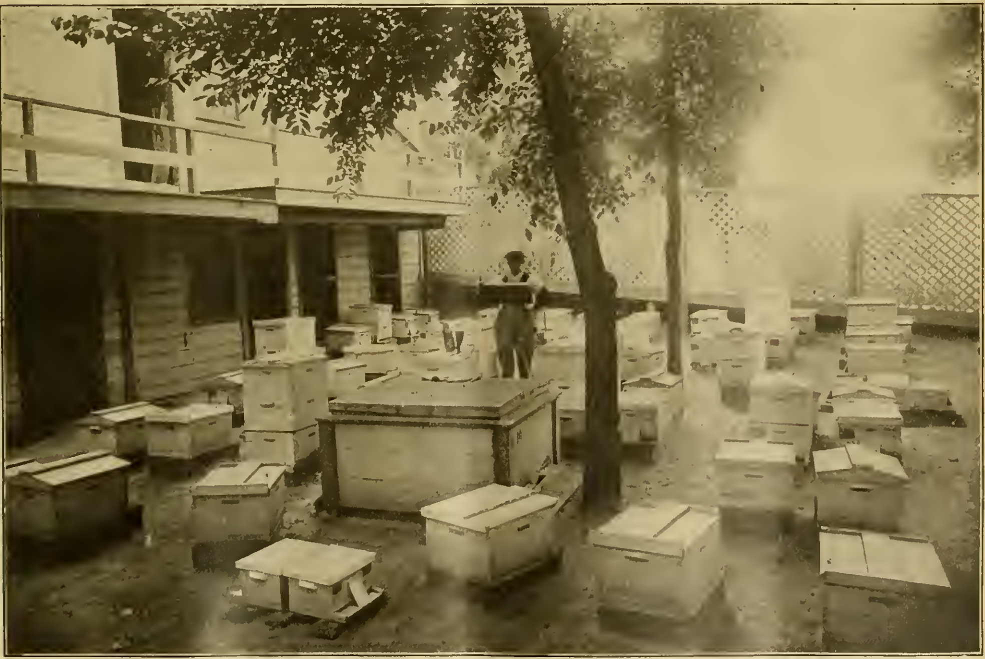
44th Year. CHICAGO, ILL., NOV. 10, 1904. No. 45.

MASSACHUSETTS AGRICULTURAL COLLEGE

H. G. ACKLIN.

ETHEL ACKLIN.

MRS. H. G. ACKLIN.



HOME APIARY OF "THE ACKLINS", OF RAMSEY CO., MINN.

For November

GLEANINGS IN BEE CULTURE.

Are you one of the 20,000 subscribers to Gleanings in Bee Culture? If you are not, there are many reasons why you should be. If you are a bee-keeper every number will be worth more than the subscription price. It is the most fully illustrated bee journal published. No medical or fake advertisements. Over one thousand pages annually. It contains the latest quotations from all the principal markets in the United States. The best bee-keepers contribute to every issue.

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4. Gleanings 1 year and A B C of Bee Culture, postpaid, $2.00.
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6. Gleanings 1 year and Doolittle's Queen-rearing, postpaid, $1.75.
7. Gleanings 1 year and Standard Corneil Smoker, postpaid, $1.85.
8. Gleanings 1 year and American Bee Journal 1 year, $1.60.

THE ROOT CORRESPONDENCE SCHOOL OF BEE CULTURE.

The demand for practical bee-keepers is greater that most people suppose. We are unable to supply the needs so started a correspondence school to fit any one to take advantage of these offers. We do it too at a very reasonable cost. The course also is of greatest value to beginners wishing to make bee-keeping pay, and for those studying bees for recreation. Prospectus giving full particulars will be sent on request.

"Schools of Correspondence are now teaching almost everything; in fact, I have often wondered that some one did not start a correspondence school for teaching bee-keeping, and now I see by an advertisement in the last issue of the Youth's Companion, that no less a firm than our old friends, the Roots, of Medina, Ohio, have done this very thing. I believe that no person or firm in this country is better fitted then they for making a success of such a venture, and I shall watch the outcome with much interest."—*The Bee-keepers' Review.*

"The A. I. Root Company, of Medina, Ohio, has established a correspondence school of bee culture. As this is one of the largest and best firms making bee-keepers' supplies, it is safe to say that its school will be first class in every respect."—*N. W. Agriculturist.*

GOODS AND DISCOUNTS.

The discount of our bee-supplies ordered in November for next seasons use is 5 per cent. A thrifty business man never fails to take advantage of this size discount. Why should a bee-keeper neglect such a matter? Catalog prices will remain same as this year.

December, 4 per cent.
January, 3 per cent.
February, 2 per cent.

AIKIN HONEY-BAGS.

Perhaps it is not yet too late to put your crop in these bags to sell. We have a good stock on hand, and can supply them promptly. Prices on application.

SIMPLEX HONEY-JARS.

This beautiful jar is meeting the approval of the honey seller. It costs no more than the older forms. Is a package that will show off your product to the best advantage, and places it beside the finest on the grocery shelves. A neat label helps. We print them. Work up a home market, for they are the most paying.

CANS AND CASES.

We are shipping promptly anything in the line of honey cans and cases. A good stock of every thing needed at all branch houses. Write us direct for catalog or to any address below.

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We furnish promptly all kinds of rubber stamps. The best made.

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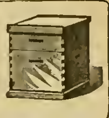
BEE JOURNAL

Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

GEORGE W. YORK, Editor. CHICAGO, ILL., NOV. 10, 1904. Vol. XLIV—No. 45.

Editorial Notes and Comments



The Annual Convention Season.

Perhaps it has been observed by others also that the convention season among bee-keepers usually begins each year with the meeting of the National. But the majority of the apiarian conventions are held between Nov. 1 and the following March. It is the best season of the year for most bee-keepers to get away from their homes and their other work. It pays any wide-awake bee-keeper to go to the convention. It's a good thing to meet others who are engaged in the same kind of business as yourself. So attend all the bee-keepers' conventions you can, and, like a sponge, not only soak up some of the good things that are said, but allow yourself to be "squeezed" a little and give out something helpful when you can do so.

Order Odd-Size Bee-Fixtures Now.

Bee-keepers who use odd-size sections and other appliances will do well *to have them made now.* Almost all manufacturers absolutely refuse to make anything of this sort during the honey season. They are lucky if they are able to fill orders for regular goods at that time, let alone those which are out of the ordinary. Manufacturers can now devote their time to getting out these odd goods, and the bee-keeper is not only sure of having his stuff on hand when he wants it, but he is also allowed an early-order cash-discount which pays him interest on the money invested. The apiarists who use such supplies can readily see the wisdom of ordering *now.*

Drawing Conclusions Hastily in Bee-Keeping.

The novice is in danger of drawing conclusions without sufficient data, or without taking into account all the circumstances. If he gets a booming crop in his first year's experience, it does not follow that he has a first-class location; neither does a failure in his first year prove that his location is poor; that first year may be an exceptional year, others averaging very different. A trial of a certain plan a single year with a single colony may prove little; the same thing tried for a series of years with a large number of colonies may show an entirely different result.

Comparison, side by side, is important, and in some cases absolutely essential. A beginner has good success with a large or a small hive, and concludes that the size he has been using is the best for him, although he may never have tried anything different. If he should try a different size side by side with the size he has been using he might come to a different conclusion.

Even the experienced are sometimes caught napping. A case, apparently in point, occurs in the Bee-Keepers' Review. As a testimony in favor of feeding sugar syrup for winter, the following is given:

> "I fed 10 pounds to each colony, last fall, at the Pine Lake yard, and this apiary produced almost twice as much honey this year as the Eldred apiary produced, which was fed no sugar, yet both apiaries were in the same condition last fall. How is that?"

How much does that prove as to the effect of the sugar-feeding? Something might be proven by the comparison of two sets of colonies in the same apiary, but the difference in the foraging ground of two different apiaries might be enough to account for the difference in crops, sugar or no sugar.

Special Postal Cards for Bee-Keepers.

In Europe some of the bee-keepers' societies have gotten up illustrated postal cards that are beautiful, although probably expensive. Our National Association could furnish something of the kind at cost to its members. It would help at least a little as an advertisement of honey. Why not have it?

Publicity of Foul-Brood Cases.

British bee-keepers are still in the throes of an effort to get proper foul-brood laws, and the British Bee Journal gives side by side the proposed bill of 1896 and that of 1904. The latter contains a clause not contained in the former, which reads as follows:

> "Where a person having in his charge any bees, hive, or hives, has become aware that such bees, hive, or hives are, or is infected, he shall forthwith give notice in writing thereof to the local authority; and if he fails to give such notice he shall be liable to a fine not exceeding, for the first offence, two pounds; and for the second or any subsequent offence, five pounds."

It is said this clause is not necessary, as another clause gives the local authority power to make by-laws covering the case. Is it certain that the local authority would do so in every case? Would it be thus done in any better way than to have a general law covering all cases? Of course, "it's none of our funeral" what our British cousins may want, but it seems that the general good requires very great pains to be taken to compel any man whose bees have foul brood to take the most prompt measures possible to prevent the spread of the disease.

Some have claimed that one of the duties of a foul-brood inspector should be to publish the names of those having bees afflicted with foul brood or other contagious disease. To this it is replied that such a course would work a great hardship on any one who should desire to sell bees, queens, or combs from an infected apiary. An honest man would not want to sell foul brood, and every possible means should be taken that a dishonest one should not be allowed to. When a house contains smallpox or other infectious disease, the authorities are not careful to keep mum about it. On the contrary, they are prompt to put up a sign so that every one shall know, no matter how much a man's business may be hurt by that knowledge.

It may be for the good of the one man that a case of foul brood should be hushed up; but it is for the good of the larger number that it should have the greatest publicity.

Election of National Officers.

According to the revised constitution of the National Bee-Keepers' Association, which was adopted last December, the election of four officers and three directors will take place during the present month. With a 2000 membership it will mean a lot of votes to be cast and counted. The National now is the largest bee-keepers' organization on this continent. It ought to double its membership within the next two or three years, and we believe it will do so if it is properly managed in the interest of all its members, and also for the good of bee-keeping in general.

Carniolan vs. Italian Bees.

"York Co. Bee-Keeper", in the Canadian Bee Journal, prefers Carniolans for a buckwheat region, and Italians for regions without a fall flow. In the latter case the Carniolans will need feeding, whereas the Italians will look out for their own winter stores.

Miscellaneous News Items

The Ontario Convention will be held at Toronto, Ont., Canada, Nov. 15, 16 and 17, 1904, in the Granite Rinks, Church St. As other societies will meet at the same time, and as displays will be made, it is all called "The Fruit, Flower and Honey Exhibition". A good program has been arranged. The evening of the 15th there will be a joint meeting of the Ontario Bee-Keepers' Association with the Ontario Fruit Growers' Association and Provincial Horticultural Societies. Of course, Canadian bee-keepers will attend in full force.

Some Bee-Supply Dealers and Manufacturers.—For some time we have been longing to take a trip among the manufacturers of and dealers in bee-keepers' supplies, particularly those who are advertisers in the American Bee Journal, many of whom we have had business dealings with for years, and whom we have never had the pleasure of meeting face to face.

Well, the coveted opportunity came Monday evening, Oct. 17, when we packed our grip and started for the Northwest. We boarded an elegant train on the Chicago, Milwaukee & St. Paul railroad, and landed in St. Paul, Minn., the next morning. We were a total stranger in a totally strange land.

But it didn't take us long to find the home of H. G. Acklin and family. We had met them before at several conventions of the National Bee-Keepers' Association, and very recently at the St. Louis meeting.

As we had not announced our coming, of course we gave the Acklins quite a surprise that Tuesday morning. Mrs. A. came to the door, and so was the first to wonder where we dropped from. She at once looked up Mr. Acklin, who was in the bee-supply store putting up orders. He came in, and after a few minutes' chat proposed a carriage ride around St. Paul with the writer and Mrs. Acklin, which was very enjoyable.

By the way, Ethel, the 11-year-old daughter who has favored several of the National meetings with her singing, was in school, and doing nicely with her studies, as well as with her music.

There is more to St. Paul than we had even dreamed of. As Mr. Acklin drove mile upon mile, we were impressed with its extent of splendid streets and lovely homes. A new and most beautiful capitol is building. It is of Georgia marble. When completed it will be a gem—a big gem! The situation is ideal. Minnesota may well indulge considerable pride in the new capitol building when it is completed. But we wondered why they didn't locate it midway between St. Paul and Minneapolis, and then call the Twin Cities—well, "Paulapolis" wouldn't be bad.

That reminds us that Minneapolis now is the larger of the "Twins"—about 20,000 more in population.

In the afternoon, Mr. Acklin accompanied us on the street-cars to Minneapolis—10 miles from St. Paul—where we called on John Doll & Son, of the Minnesota Bee-Keepers' Supply Manufacturing Company. Mr. J. P. Doll, the son, was formerly in partnership with Chas. Mondeng, but bought out his interest in the business about a year ago.

We were much pleased with the pushing, business ways of Mr. J. P. Doll. He is practically the manager of the firm. Being an expert in woodworking, and understanding thoroughly the requirements of the bee-supply manufacturing business, we predict that he will soon be heard from in a way that will show that he means to succeed. And why shouldn't he? For he has not only his father helping him in the business, but also his good wife, two or three husky brothers, and a sister or two. It's a family affair. They're all at it. Keep an eye on that Doll family. They are Dolls, but not "Dollies".

John Doll & Son are makers of everything in the wood line connected with bee-keeping. Their capacity is about 40,000 sections a day; 20,000 Hoffman frames; hives, supers, fences, separators, etc. And all made of the best grades of lumber. While they are manufacturers of all wooden apiarian fixtures, they are prepared to furnish everything else required by the modern, up-to-date bee-keeper.

We returned to Mr. Acklin's home just in time to help dispose of a good supper, after which there was held an impromptu convention interspersed with snatches of bee-songs, Miss Ethel accompanying on the piano.

Mr. and Mrs. Acklin are genial copartners in the bee and supply business. Besides handling four or five car-loads annually, they have a home queen-rearing yard and a half-dozen out-apiaries. The home yard is shown on the front page, also the pictures of the happy Acklin family. Later on we will show to our readers beautiful pictures of their several out-apiaries.

On Wednesday morning, Oct. 19, we bade farewell to the Acklins, but not before yielding to an urgent invitation to be present at their next State bee-keepers' convention, to be held in Minneapolis, Dec. 7 and 8. We anticipate an enjoyable time with the Minnesota bee-keepers then.

Next week we will tell where we landed after leaving the Acklins.

* * *

Mr. Geo. W. Brodbeck, the present secretary of the National Bee-Keepers' Association, sends us the following notice with the request that we publish it in the American Bee Journal:

EDITOR AMERICAN BEE JOURNAL—
Dear Sir:—Will you be kind enough to state that I am not a candidate for the secretaryship of the National Bee-Keepers' Association another year?

Yours respectfully, GEO. W. BRODBECK.

* * *

Mr. Leo F. Hanegan, manager of the St. Croix Valley Honey-Producers' Association of Wisconsin, writes that their Association is steadily growing, having now 70 members. They started May 21, 1904. They have shipped two car-loads of comb honey so far, and have fully another car-load to ship. They think that the prices are too low, as their members received net about 10¼ cents for No. 1 comb honey, and a cent less per pound for No. 2, spot cash at the car. This does seem to be rather a low price for good Wisconsin white comb honey.

We are wondering whether the Association was able to realize more on the honey for its members than if they had not belonged to the Association. No doubt the price of honey is altogether too low, as it has not yet recovered from the big crop of last year. The market in Chicago went all to pieces about a year ago, and it likely will take several years to get back to where it was before the flood of honey at that time. We are inclined to think that before another season honey-prices will stiffen up a little, so that by a year from now, if the bee-keepers are not too anxious to push their honey to market, they will get a fair price for it. That is, if there should be a good crop next season.

* * *

The "Giving Christmas" is becoming quite the proper thing for Sunday-schools. Doubtless many of our readers are Sunday-school workers, and would be interested to know that we have an 8-page circular telling in detail how at least one Chicago Sunday-school managed such a Christmas service in 1902 and 1903; and it was a big success each time. It is mailed for 6 cents a copy (stamps taken); 2 copies for 10 cents, or 5 copies for 20 cents. Address all orders to the office of the American Bee Journal.

Opinions of Some Experts

Smoking Bees—How and How Much.

17.—*(a) Upon opening a hive, do you use smoke before removing the cover?*
(b) If so, how much?
(c) How much smoke do you use while removing, or after removing, the cover?
(d) When using a smoker, do you have the thumb, or the fingers, on the side of the bellows next the fire-box?

N. E. FRANCE (Wis.)—b. Very little. d. Fingers.

P. H. ELWOOD (N. Y.)—a. Yes. b. One or two puffs at the entrance. c. As much as is necessary to keep them quiet. d. The fingers.

G. M. DOOLITTLE (N. Y.)—a and b. Use a little over the tops of the frames c. As above on vicious bees. On others, none. d. Fingers.

C. H. DIBBERN (Ill.)—a. Yes, always. b. That depends somewhat upon what I wish to do. c. Same answer. d. I generally use several fingers.

MRS. J. M. NULL (Mo.)—a. A very little. b. Only sufficient to serve notice on the bees. c. Only enough to keep them quiet. d. Do not stop to know any way to get hold of the smoker.

L. STACHELHAUSEN (Tex.)—a. No. c. I use an oil-cloth on top of the frames, and while removing it I smoke the bees just enough (and no more) to keep them quiet. d. The fingers.

PROF. A. J. COOK (Calif.)—a. Yes, a little. b. Two or three puffs. c. Always use as needed, often or none at all. d. It depends upon the position of the smoker as I reach for it.The fingers reach for the farthest side.

REV. M. MAHIN (Ind.)—a. Yes, usually. b. Onlya little. Sometimes I give the bees a puff or two at the entrance, and blow a little smoke in each of the 3-inch holes in the board cover over the frames. c. Usually none. If the bees are disposed to rush out as the board is lifted, I drive them back with smoke. d. The fingers, of course. To have the thumb next to the fire-box seems to me exceeding awkward and unhandy.

EUGENE SECOR (Iowa)—a. Not often. b. Just a little. c. Only enough to drive the bees down and out of the way. d. Have no established rule—sometimes one way and sometimes another. Depends somewhat upon style of smoker.

C. DAVENPORT (Minn.)—a. I usually give them two or three puffs at the entrance. b and c. It depends; some bees require more than others, and then the same bees require more at some times than they do at other times. d. Thumb.

JAS. A. STONE (Ill.)—a. Very seldom. c. Use light puffs of smoke till bees move where wanted. d. Owing to the kind of bellows. If a Clark, thumb on top next to bellows; if any of the upright smokers, the fingers next to the bellows.

ADRIAN GETAZ (Tenn.)—a. Sometimes, but not often. It depends upon the circumstances. b. Only enough to subdue the guard-bees. c. Depends upon the circumstances. Enough to subdue the bees so they will not attack the apiarist. d. The fingers.

J. M. HAMBAUGH (Calif.)—a. Not always, owing to the disposition of the bees. b. This, again, is owing to the disposition, conditions, etc. c. As little as possible to accomplish the work. d. That would be owing to the shape of the smoker.

R. L. TAYLOR (Mich.)—a. Sometimes, and sometimes not, owing to whether the bees are good-natured or inclined to be aggressive at the time. b. Just a "smell." c. From none at all to two or three good puffs. Only what is necessary to control the bees. d. The fingers.

E. D. TOWNSEND (Mich.)—a. No. c. This using of smoke is a question no one can answer without knowing the disposition of the bees, then it may require more smoke out of season than during the honey-flow. I puff in a little smo then watch their actions a moment, and if they show fight I give them a little more. It takes quite a long experience to understand thoroughly the use of smoke in handling bees. d. Fingers.

Wm. Rohrig (Ariz.)—a. Usually I do not. b. Very little. c. A few light puffs over the frames just as the cover is raised, and before it is entirely removed, is in most cases sufficient; in some cases a little more may be necessary, after the cover is removed. d. The fingers.

C. P. Dadant (Ill.)—a. Yes, it is important. b. Just enough to bewilder the bees at the entrance, except early or late in the day, when we use more. c. That depends upon the behavior of the bees. No rule can be laid. d. The thumb, if the smoker is made according to our idea.

Dr. J. P. H. Brown (Ga.)—I usually give a few puffs at the entrance, and only enough to keep the bees out of the way when removing the cover. Too much smoke is worse than not enough. When bees are gathering honey they need but little smoke; when idle, they may need more.

O. O. Poppleton (Fla.)—a, b and c. These all depend upon conditions when opening the hives, whether honey is flowing freely or not, whether colonies are strong or not, whether irritable or mild, etc. It is impossible to have any set rule. Each colony makes, and sometimes enforces, a rule of its own. d. The fingers.

Dr. C. C. Miller (Ill.)—a. Generally. b. A puff or two at the entrance. c. Depends upon circumstances and the temper of the colony. Usually three or four puffs over the top, more if the bees show fight. If a queen is to be found, extra pains is taken to avoid smoke. d. Fingers. I wouldn't want to twist my arm out of joint.

E. Whitcomb (Nebr.)—a. That depends entirely upon conditions. If in the middle of the day, and the colony is one marked with docility, they will become sufficiently alarmed while removing the cover. If the colony is a hybrid, I would not only use smoke freely, but at the same time the toe of my shoe against the hive in order to thoroughly alarm them. I would then allow four or five minutes to intervene before uncovering them. I use only the amount of smoke necessary according to the breed of the bees inside, and conditions. Too much smoke injures the bees, or disarranges the inside workings of the colony. d. I have never taken much pains as to that. Use which comes handiest, taking care to keep both thumb and fingers off the fire-box.

James A. Green (Colo.)—a and b. Unless honey is coming in very freely, I always give a light puff or two at the entrance before removing the cover. c. Just enough to keep the bees peaceable. The amount depends upon the kind of bees, the season, and various other things. d. I almost invariably have the fingers on the side next *to* the fire-box.

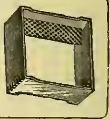
R. C. Aikin (Colo.)—a. If no flow of nectar, hit the entrance first; during flow just from the top only, blowing in the instant the cover raises enough. b and c. Quantity according to temper of bees, time and kind of day, etc. Altogether too variable to describe. Practice only tells in this matter. d. Don't know; never stop to think; probably both ways.

S. T. Pettit (Ont.)—a. Yes. b. Not much. I want every bee in the brood-chamber to smell smoke. c. Very little indeed when looking for the queen; and more for other operations. Smoke should more or less generally stream in with the light under the cloth or cover. Not room here to do justice to the subject. d. The thumb. It may not be the best way, but that is the way I started.

G. W. Demaree (Ky.)—a. For the past 25 years I have experimented with the use of smoke to control bees in and out of their hives, and I have found that conditions of weather, temperament of the bees being handled, etc., makes it impracticable to adopt any precise rules in the use of smoke to control bees. I seldom use smoke till the hive-cover is removed. b. Lightly at the start, and more if necessary to quiet the bees. c. I apply the smoke just as circumstances demand. d. When using the smoker the position of the fire-pot is above the bellows so as not to heat the latter, as is the case when the fire department is below the bellows. Thus handled the thumb goes on the top side of the bellows next the fire-box.

P. S.—This is a long answer, but the query is important.

Contributed Special Articles



The Bee's Tongue—Its Formation and Use.

BY PROF. A. J. COOK.

I am often questioned by readers of the bee-papers in regard to the precise anatomy of the bee's tongue. I am glad to give this as it is one of the most wonderful chapters in the whole book of nature. I know of few insects that have such diverse habits as do our bees of the hive. They accomplish very much with their mouth organs and thus these organs must be very greatly differentiated, as indeed they are. Wonderful as is the anatomy of the honey-bee, no part of its structure is quite so marvelous as is its tongue. What makes this all the more interesting, the exact structure and work of the bee's tongue was not understood by any one till the present generation. Even the last edition of the Encyclopædia Brittanica speaks of it as a solid organ, and the whole description is one series of blunders. When we remember that this organ sips honey from the deepest flowers, sucks it in from the mammoth drop, or laps it up as it is spread thinly upon glass or platter, we may well conceive that the organ itself must be exceedingly modified to perform such varied functions; especially as all is done so perfectly.

The tongue is called "labium," and consists of the thick, heavy, shorter basal portion—the mentum—and the long, hairy, flexible terminal portion—the ligula. From the base come the two jointed organs, common to almost all insects—undoubtedly feelers—the labial palpi. Besides these, are the maxillæ, grooved and pointed, and nearly as long as the ligula. When these are brought together they make a tube of themselves, and are used, as I have proved by feeding bees colored syrup, as a sucking-tube when they can get at the honey in quantity.

But the ligula itself is the most interesting part of this wondrous mechanism. This is really a tube within a tube. But the inner tube through which the honey is drawn is not complete. It is slitted on its under side to near the end, where there is a sort of button. The edge of this slitted inner tube is attached by a thin, much-folded membrane with the edge of the outer one. We see, then, that both tubes are incomplete cylinders, a little section being omitted. But as these edges are united by the membrane, the outer tube is really complete, and though it has no connection with the outside, it is connected at the base of the tongue with the blood cavity of the bee. We see, then, how the bee can dart its tongue out so quickly. It simply forces the blood into this blind outer tube, and of course the tongue shoots out to its full length.

When not in use, the ligula is not only drawn back, but also, with the maxillæ, is doubled back under the head. We have seen how the bee gets honey from a great drop by sucking it through the extemporized tube by approximating the grooved maxillæ. We now have only to consider how the bee sips from long, deep flower-tubes, or wipes the honey, if we may so speak, from glass or other surface. By use of muscles within the tongue, the bee can push the inner tube entirely outside of the outer, thus straightening the folded membrane which united the two. In this way it laps up the honey. I have proved this by watching the bee closely as I held it in my finger, and permitting it to wipe up the honey on a piece of glass. The timidity of the bee never prevents it from taking the honey, no matter if it is a prisoner in one's hands. Mr. Cheshire urges the opinion that this peculiar structure is to permit the bee to clean pollen from the folds of the membrane. We know that nectar is very likely to have pollen in it. He thinks that as the bees sip this, the pollen may lodge and the evisceration of the inner tube permits the bee to clean the pollen from this part of the organ. It is possible that he is correct, yet I have not found the pollen in the folds, nor should I expect to.

The inner tube is quite rigid, and so is substantially a tube without break except as the bee may push it out and separate the lips. We should expect, then, that the pollen would flow freely with the nectar through this central tube, and see no reason why it should push out into the folds of the membrane, indeed, we can hardly see how it could do so. Is it not enough to assign it the function of lapping, which it surely possesses? When the bee wishes to gather nectar from long flower tubes, then, it leaves the tongue all intact, the inner tube as a tube embraced within the outer tube and the connecting membrane neatly folded between the lips of the outer tube.

Here, then, we have substantially a tubular tongue, and the bee, by use of it, is enabled to push this delicate organ deep into the corolla-tube of the flower and sip the tiny droplet, it may be, of nectar from its extreme depths. The tubes all meet in a single tube at the lower part of the mouth and pass the honey to the gullet whence it flows on to the honey-stomach. It only remains to be said that just where this tube enters the mouth there empties a single tube which comes from the great glands of the thorax and upper head. This undoubtedly contains the ferment that digests the nectar, for, as we all know, honey is digested nectar.

The nectar of flowers is mainly cane-sugar, and this requires digestion before it can be assimilated or used in the body. By action of this ferment from the glands just mentioned, this cane-sugar is converted into honey or reducing sugar. As I have often stated, this is an interesting and important fact and one which we as bee-keepers may well push to the front, for it shows, beyond question, that there is no sweet so wholesome and desirable as honey. Like the liver-sugar, formed in the body, it is all ready for use, and thus honey as digested sugar needs no effort or energy on our part to make it available for use.

If we feed bees cane-sugar they digest this in the same manner. Careful experiments, which I made some years ago, when I fed a large amount of cane-sugar at nightfall to a colony, showed that some of this ferment is put into the cell with the nectar. Thus digestion goes on after the honey is stored. I found much greater proportion of reducing sugar some days after than I found the next morning after feeding. Digestion is always somewhat imperfect, so that all honey shows a trace of cane-sugar. Los Angeles Co., Calif.

Comb-Frames and their Spacing.

BY T. F. BINGHAM.

I noticed "Mr. Hasty's Afterthoughts" query, relating to the storing of honey inside of frames and sections. I will give the facts, as I am able to demonstrate—note the word *demonstrate*—not to argue, to theorize, etc.

I will describe my frame, and as there is but one bee-keeper besides myself using it, or anything exactly like it, it may be of interest, even if of no value.

It has been argued that deep top-bars produce less burr or brace combs than the usual sizes. I shall not attempt to discuss that feature—nay, not even intimate a theory—still it would be safe to infer that the hive I made, like the smoker and knife, were made strictly for my own uses, and to meet my own special needs. The frames above referred to are called "closed-end," patented Oct., 1866. In form and size I have made several changes, but it is practically the same, and accomplishing the same ends as when first invented, that is to say, they secure all the honey and comb built in the inside, not outside, of the frames.

Right here it may be in order to answer a question not directed to me, regarding whether closed-end frames are better for securing more honey in sections than hanging frames (noted in a recent copy of the American Bee Journal.) The proper understanding of the above would lead to the conclusion that they are. One would infer that bees sometimes build comb and store honey outside of the frames in bee-hives. This is especially true in the production of section-honey.

It seems hardly necessary to say that the honey stored in various places around hanging frames would have been stored in the sections if there had been no other places. Theoretically, there is no question, no doubt, that more section-honey will be stored in sections when there are no other places to put it.

To return to the comb frame, an empty frame is on my desk and a common rule. I find its length outside just 12⅜ inches, inside 11⅝, ends 6½x1½. The top-bar and bottom are alike, and just 1¼ inches wide by 5-16 of an inch thick. The top-bar is nailed inside the ends just ¼ inch from the ends, which secures the shallow chamber, as per Langstroth patent.

Of course every bee-keeper would like to know why brace-combs are not built in such frames. Well, like Dr. Miller, "I don't know." One reason which caused me to use 1½ inch spacing for combs, was that I did not regard the 1⅜ used by Mr. Langstroth as space enough for combs, and the thirty-four years that I have used this hive have confirmed my opinion that 1⅜ inch space, net, for an average of combs-space, is not enough.

It would be easy to say that such short, thin top-bars never sag in the center, and that the spaces between them are always the same; that the bees have no use for wider or thicker top combs than the frames allow. The instincts of bees, like the instincts of people, cannot readily be changed. Instincts can only be directed. Clare Co., Mich.

Some Facts About Honey and Bees.—This is the subject of an article written by Mr. J. E. Johnson, and published on pages 581–82 of the American Bee Journal for Aug. 25, 1904. We have republished it in 4-page leaflet form for general distribution, and furnish it, postpaid, at 35 cents per 100 copies. Send all orders to the office of the American Bee Journal.

OUR TOIL DOTH SWEETEN OTHERS

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Cabinet-Maker's Scraper for Scraping Sections.

Last year Dr. Miller presented me with a steel scraper such as cabinet-makers use, with which to scrape sections. It came too late for me to try it last year, but it has been thorqughly tried this year and I hasten to let the sisters know how beautifully it does the work—away ahead of anything I ever tried before. It made me feel almost vexed to think I had scraped sections with nothing but a knife all these years when I might have had something so much better.

The one I have is 6 by 3 inches. The bottoms and tops of the sections are scraped and sandpapered a whole super at a time, and it seems to me, that for that part of the work nothing could be better. What I want now is a knife made of the same material and in the same way to scrape the edges of the sections, although this scraper might serve that purpose. The truth is, I never tried it because I thought it would be clumsy.

You can buy the scraper (ask for a cabinet or veneer scraper) for 10 or 20 cents, or you can make one from a piece of the blade of an old saw. Any cabinet-maker can instruct you as to the peculiar method of sharpening.

Cleaning Up After the Men-Folk Bee-Keepers.

"Somnambulist," who has well been styled "that delightful dreamer," has evidently been taking notes and doing some thinking with a sleepy eye in the direction of the sisters' comfort; as witness the following from the Progressive Bee-Keeper:

"I wonder if the bee-keepers whose wives and daughters clean up after them ever consider how very difficult the removal of wax and propolis from a hundred and one things which have come into too close contact with same? I have been tempted to surmise that if they did there would not be so many things daubed up. A little more thoughtfulness on the part of the bee-keeper would save much labor on the part of those who are often scarcely able to keep up with what seems naturally their part. One lady of my acquaintance has discovered the use of turpentine in removing propolis. Would you believe it, I have known of one good man who was so close with his wax that his wife and daughter had to 'slip' a little when needed for household purposes. These people laid it among linen that was to remain idle for a time, to prevent its getting yellow."

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Report for the Season—Cleansing Beeswax.

I wintered my bees on the summer stands. I lost 32 colonies last season, as my husband was sick and I could not give them the attention which they needed. A few of them starved, and the balance winter-killed.

The honey-flow in this part of the State was good. The white clover was fine, but the weather was dry through buckwheat and goldenrod bloom. I secured 700 pounds of honey from 17 colonies, spring count, and my increase was more than double.

I enjoy working with the bees. I gained a great deal of information this season through the American Bee Journal and the handling of bees. The "Old Reliable" and Gleanings are next to my Bible in literature. I get more information for $1.00 through the American Bee Journal than from any other paper I know. I could not do without it. Long may it prosper!

Jefferson Co., Pa., Oct. 22. MRS. LAURA TUCKER.

P. S.—How much sulphuric acid ought to be used to one pound of beeswax to whiten it? I have a lot of old combs which I wish to render. L. T.

The acid is in proportion to the water used, rather than to the amount of wax. If the wax requires very little cleansing, use one part of acid to 200 of water, making it stronger as the wax has more impurities, and in a very bad case one part of acid to 50 of water. Drop the acid into the hot wax, and do it very carefully, or you will make the whole thing boil over.

A vessel of stone, wood, or some other material not affected by the acid must be used. Some, however, the Dadants among them, object to the use of acid, preferring the wax uncleansed by acid.

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A Paste for the Hands.

Have you noticed how much more frequently than formerly recipes containing honey appear in our leading magazines and papers? The following is taken from "The Ladies' Home Journal," and is from the pen of no less a person than Emma E. Walker, M. D.:

"An excellent almond paste is made as follows: 32 parts of blanched bitter almonds are pounded to a fine paste; add gradually a mixture of honey, 60 parts; yolk of egg, 30 parts; almond oil, 60 parts; bergamot oil, 1 part; and clove oil, 1 part. This paste is excellent for rubbing on the hands at night."

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses. By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

BEE HIVE HATCHED CHICKS—QUEENS STINGING.

Yes, Mrs. Amos, with bees for part of the heat, and hot water bottles for part of it, no doubt it is possible to hatch eggs. Quite ingenious of you to try it—and get three chicks out of twelve eggs.

And that's a very interesting experience which you contribute about the two recently emerged queens imprisoned in the palm of your hand. Trying to sting each other is a probability (perhaps not a certainty) under such circumstances. I hardly think bad marksmanship gave you the sting. 'Pears like that when once the half dormant stinging machinery is fired up, and got nicely to running, there is more willingness to scatter stings around "permiscus." I take it the sting you got was only a prick, not a solid and deep one that tore the sting away. By the way, I'm not aware that a queen ever has her sting torn away. Who knows? Page 665.

ON THE BALLING OF QUEENS.

No, Sister Wilson, I don't say just yet that bees *never* ball a queen to protect her; but I have long suspected that same. Somehow the thing doesn't look like a friendly act. Usually happens at a time when bees are overworked at breeding, and feel edgewise at the queen on that account—leastwise I play it so. Also the queen can, and sometimes does, show very bad and provoking manners—in extreme cases pipes, sulks, runs off the combs, kicks in the mouth her most faithful friends when they offer her food. If she was where she ought to be they couldn't *chase and catch* her exactly; she would be in touch all the while. Perchance they consider this running off alone as a sort of threat to desert the hive; and they respond with a, "We'll see about that." Or say we look at it in this way: Angry because there are no more cells ready for her to lay in she sulks off alone in the corner of the hive. Now in early spring when the colony is weak (the situation we are considering mostly) the corner of the hive is the home of bad smells, the result of last winter's death, decay and mold—not yet made balmy and sweetened up as the whole interior will be later on. She must herself contract a portion of the bad smell by lurking there. I've a notion this may help them on toward the inclination to ball her on the opening of the hive—and perhaps oft when it is not opened. She doesn't smell right.

SOME QUEENS AND WOMEN FOLKS.

Well, queens certainly are genuine women-folk. Why should any one wish to deny them the right to change their minds? One on page 668 first clinches another queen she comes in contact with, then changes her mind and lets her go. So little perturbed is she in mind that she falls to eating some honey which is at hand. *The other queen not coming to eat she takes some of the honey to her.* (Makes one think of ancient heroes in literature in the few occasions when they get chummy on the battle-field.) But, lo, another change of minds bobs up when a third queen is put in. She kills her off hand, and having killed her, kills her newly-made friend, too. Did she suspect her of wishing to mix in on the wrong side? Or is the passion of killing, once aroused, blind and ungovernable—among insects as sometimes among human savages? It's a fascinating study to find out—find out *really*—what thoughts and feelings are actually cherished by the most highly developed creatures below us. I take it that Wm. M. Whitney is a competent observer; and he should have our thanks for the observation.

CLOSED ENDS VS. OTHER FRAMES.

There's a theory that ordinary frames let air circulate around the frame ends to such an extent that breeding is hindered. Is it a fact? Closed-end frames are advised as a remedy. Questioned to 26 experts as to how this is, 11 fail to score, 11 think that the ordinary frame promotes early breeding practically just about as well, and only 4 think the closed-end desirable for the purpose named to a mentionable degree. Page 676.

Ask Doctor Miller ??

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. MILLER, Marengo, Ill.

Wintering Bees in the Cellar.

I have a cellar under my dwelling-house, in which I intended to winter my bees. Do you think the noise from the floor above would disturb them? It is plainly heard when in the cellar, but it is not such a noise as would jar the hives the least bit. Could I winter them in this cellar with good results? MINNESOTA.

ANSWER.—Yes, so long as there is no jarring, they will stand the noise that will reasonably be made overhead.

◆

Colorado as a Honey State—Roller Foundation-Machine.

1. I came from Vermont to Colorado last spring because I was troubled with the asthma there, and am free from it here. So I expect to make my home in this part of the country. I had about 100 colonies of bees when I lived in Vermont, and made a good thing out of them. There they gathered honey from basswood and clover, but out here there is neither of these. In what part of Colorado would I better locate in order to get the best results? I would like to buy 100 colonies to start with, and devote my whole time to the bees. In the East I also had my farm work to do, and sometimes had to jump off of a load of hay to hive a swarm.

2. Where can I get the roller foundation-machine? I had two when I lived in the East, one for brood and the other for surplus comb foundation. COLORADO.

ANSWERS.—1. There are plenty of good locations in Colorado, a good alfalfa region being in general a good honey-location; but the trouble is to find a location not already occupied, and I can't inform you on that score. Indeed it will no doubt be difficult to find one. Your best plan might be to advertise; in that way you may strike some one who wants to sell out.

2. Foundation mills may be obtained of the leading bee-supply dealers.

◆

Carniolan Bees—Crimson and Alsike Clover—Buckwheat.

1. Is a genuine Carniolan bee dark in color or light?
2. Does crimson clover bloom the first season after sowing?
3. Is the spring the proper time to sow crimson clover? If so, what time in the spring?
4. Is crimson clover good for hay, and will it produce well?
5. Which is the better for bees, crimson or alsike clover?
6. Is the ground better fitted if plowed in the fall?
7. Can I sow buckwheat in the spring, and continue at stated times through the summer, so as to have it bloom at certain periods, and make it profitable? ARKANSAS.

ANSWERS.—1. Very much in color like the common black bee, but the rings made by each segment of the abdomen are a little more distinct in the Carniolan.

2. Yes, if sowed early enough it may bloom the same year; usually not till the following year. That's in the region of 42 degrees north latitude; far enough south it might more readily bloom the same year after early sowing.

3. If sown in the spring it should be as early as frost is well out of the ground; but oftener it is sown about the last plowing of corn, and not expected to bloom till the next year.

4. Yes, where conditions are favorable.

5. I don't know; all things considered, perhaps alsike.

6. That depends on local conditions. Ask farmers in your neighborhood whether it is advisable to fall-plow if clover is to be sown in spring.

7. Generally it is not advisable. Buckwheat seems to fit better as a later growth. Even if it should succeed when early grown, it would not be desirable where the earlier harvest gives honey of lighter color.

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Reports and Experiences

Bees Still at Work.

Bees are working hard yet, and the honey they are bringing in now is of a very fine flavor, and water-white. We work for both comb and extracted honey. I have taken off a good deal of comb honey this week, and still have more on the hives. I expect to extract next week.

EDW. M. RAGAN.
Lafourche Co., La., Oct. 30.

Climate—"Swarm Rhymer" and the Weather.

DEAR MR. YORK:—I am real mad; you allowed me to fall up against that confirmed dyspeptic, Mr. Hasty, the man of "afterthoughts" but not of forethoughts, or, shall I say it, a man of no *original* thought. Now, I hope he will go away back in a corner and be a good boy.

Yes, I am provoked, as he saw fit to "yump" all over me, as your friend, Yon Yonson, would say. On page 712 he takes me to task for a trifling matter that a poor compositor† of the "Journal" caused me to set forth in a previous number (p. 628). My recollection of the statement, "Close upon a century ago", was written, "Close upon a *half*-century", etc., but somehow the "half" fell by the wayside. Further along in the same article the half-century statement crops up all right—possibly it might have been one of *my* "afterthoughts".

SAN FRANCISCO'S CLIMATE.

Why, my dear Afterthoughter, didn't you know that San Francisco had more than one climate in a day? Laws a massa, you can have a different climate for each of the 3 meals you choose to eat in the day. This is a generous clime! You see, we are almost situated on an island. The city is about 6 miles across from east to west. The sun goes down in the Pacific Ocean, to put it that way, and that's the cold side of the city—the cold winds and fogs breed and come in from there. On the north is the Golden Gate, and that is not a breeding place for much of anything, unless it is crabs, fish and pieces of old hulls of ships that went down to Davy Jones' locker in some of those dense fogs that roll in the Gate upon the peaceful waters of the Bay of San Francisco, which generously washes away, twice a day, the large amount of sewerage that is carried into the bay from the city's admirable drainage system. The east side is fairly calm.

Then, the city is divided into valleys by hills of high and low degree. These, along with other causes, produce currents and counter currents to bestir

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24A48t No. 75. Birmingham, Alabama.

STRAWBERRY AND VEGETABLE DEALERS
The Passenger Department of the Illinois Central Railroad Company have recently issued a publication known as Circular No. 12, in which is described the
best territory in this country
for the growing of early strawberries and early vegetables. Every dealer in such products should address a postal card to the undersigned at DUBUQUE, IOWA, requesting a copy of "Circular No. 12."
J. F. MERRY, Asst. Gen'l Pass'r Agent.
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Good for the Balance of This Season Only.
As I desire to unite my nuclei as soon as possible, I will sell ITALIAN QUEENS at the following low prices, until my present supply is exhausted:
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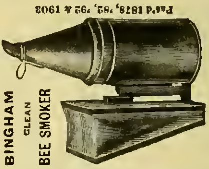
SEND FOR CIRCULAR.
T. F. BINGHAM, Farwell, Mich.



DEAR SIR:—We have used and sold all the advertised smokers, but find none that suit us as well, or that find as much favor with our patrons as the Bingham smoker. They have no equal. THE FRED W. MUTH CO., Cincinnati, Ohio.
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themselves for good or for worse. Some of these valleys are notedly warm; others are, at many times, anything but agreeably comfortable, they being at times damp and chilly. But I am not going to say anything more that may be construed as showing that we have not a delightful climate in this city all the time. It takes a denizen of the region about Los Angeles to say good things about his neighborhood. Well, at any rate, we have no sand-storms; no excessively hot weather; no terrific north winds; no frosts to kill the oranges and tender plants growing in our gardens, and—well, you didn't know we had such a mild climate! We have, though.

When bees were first brought to this city, they were located in one of the worst portions of the city. In those days the city was not the paradise that art, taste and money have since made it become—one of the finest cities in the world.

"A SWARM RHYMER."*

Oh, how good of you, Mr. Hasty, to run off some poetry for me through that mill of yours. Pardon me for stating above that you were "a man

This Lightning **Lice Killing Machine**

kills all lice and mites. No injury to birds or feathers. Handles any fowl, smallest chick to largest gobbler. Made in three sizes Pays for itself first season. Also *Lightning Lice Killing Powder, Poultry Bits, Lice Murder, etc.* We secure special low express rates. Catalog mailed free. Write for it.

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The Novelty Pocket-Knife.

Your Name and Address on one side—Three Bees on the other side.

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(THIS CUT IS THE FULL SIZE OF THE KNIFE.)

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last-time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00.) We will club the Novelty Knife and the Bee Journal for one year, both for $2.00.

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☞ Please allow about two weeks for your knife order to be filled.

of no original thought,". Why, your poetry shows you are—rather starchy. Gee, the bees will get all stuck together. No, I can't accept your effusions. They do not put high enough value on such early and vigorous swarms as we have here in March and April. Then, I want something for those occasional February "bee-offshoots" we have. Let me see: A swarm is "worth a chunk of cheese"—say 15 cents worth, and the maggots thrown in. It's too cheap, and I won't have it. And the starch! Oh, ye bees, stay in till May, and you will be worth a ton of hay—$12 the ton just now. That makes the April bees as small as 30 cents. Oh, Hasty, how cruel of you to libel our pets in so unbecoming a manner! Try again, but leave me out; I may not be worth 10 cents, and can not cut much of a figure, any way.

FREAKY WEATHER.

Talking of climate a little way back now reminds me to get in a few words of the wonderful climate we are having here about the bay. And this has nothing to do with what I may have heretofore said about the weather in recent issues of the "Journal". I suppose it has not often fallen to the lot of Eastern people to see fruit and ornamental trees blossom twice during the same year. Such things happen sometimes here in California. Lilacs are in full bloom in March, cherries in the latter part of the same month and early in April. Well, these trees bloomed last spring and matured—that is, the fruit-trees—a fair, or, in most places, a full crop of fruit. To-day it is no uncommon thing to find lilacs and cherries in full bloom. The sight is an odd one, to say nothing of its being abnormal. And the bees are gathering nectar from the blossoms, as I took occasion to find out. The season is a peculiar one. I would write more on the subject, but as I have already mentioned the unusually heavy early rains (we have had 7 inches hereabouts) I shall not say more of them, or how rapidly vegetation is springing skyward. Suffice it to state that calla lilies are now bursting into bloom, just as we find them in February and around Easter.

Well, Mr. Hasty, you have caused me to inflict a long letter upon the "Old Reliable", but I hope you and they now know more of our wonderful climate—and eccentricities—than you did before. W. A. PRYAL.

San Francisco Co., Calif., Oct. 25.

[† "That poor compositor" wants us to tell Mr. Pryal to be a little careful about the way he refers to her craft. This also includes the proofreader. Both are ladies. Mr. Pryal had it "century", and not "*half*-century", in his first article. If those two ladies ever get after him, he'll hop further and faster than a California jack-rabbit. We believe he is still a lonesome man, never having found his "better half".

* A "swarm rhymer" is respectfully referred to Dr. Miller to work up for the next edition of some big dictionary.—EDITOR.]

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OUR TOIL DOTH SWEETEN OTHERS

"Combed" and "Extracted"

Propolis in Varnish.

A Holland-Dutch bee-journal says a very nice varnish for furniture can be made by dissolving propolis in alcohol and then straining it. By the way, who has ever made a quotation on propolis by the pound? Perhaps many a nice penny is flung away on this rather troublesome substance.—Gleanings in Bee-Culture.

Artistic Bee-Hives in Europe.

It may be noticed that a great deal more artistic taste is exhibited in the construction of bee-hives in England, Germany, etc., than is customary in America. In Carniola, a province of Austria, it is an old-time custom to decorate hives very fancifully. Scenes from Biblical history are very commonly represented in fancy colors upon the fronts of hives, also historical faets as relating to the history of the country. The common customs of the people receive attention also, and the humorous side is frequently brought out in a striking manner. Some of the older pieces are real pieces of art well worth preserving.—American Bee-Keeper.

Migratory Bee-Keeping in Russia.

A peculiar method of migratory bee-keeping is practiced in Russia on the larger rivers flowing south, according to the Rhein, Btzg. Large log-rafts are constructed and covered with soil upon

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Made of artificial stone. Practically indestructible, and giving entirely satisfactory results. Comb foundation made easily and quickly at less than half the cost of buying from the dealers. Price of Press, $1.50—cash with order. Address,

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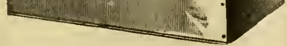
Best Extracted Honey For Sale **All in 60-lb. Tin Cans********

Alfalfa Honey

This is the famous White Extracted Honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can't get enough of the Alfalfa extracted.



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This is the well-known light-colored honey gathered from the rich, nectar-laden basswood blossoms. It has a stronger flavor than Alfalfa, and is preferred by those who like a distinct flavor in their honey.

Prices of Alfalfa or Basswood Honey:

A sample of either, by mail, 10 cents, to pay for package and postage. By freight—two 60-pound cans of Alfalfa, 8½ cents per pound; 4 cans or more, 8 cents a pound. BASSWOOD Honey, **half-cent more per pound** than Alfalfa prices. Cash must accompany each order. You can order half of each kind of honey, if you so desire. The cans are two in a box, and freight is not prepaid. ABSOLUTELY PURE BEES' HONEY.

Order the Above Honey and then Sell It.

We would suggest that those bee-keepers who did not produce enough honey for their home demand, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere.

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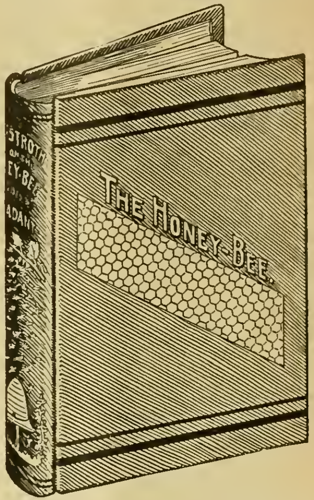
Revised by Dadant—Latest Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son.



Each subject is clearly and thoroly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

The book we mail for $1.20, or club it with the American Bee Journal for one year—both for $2.00; or, we will mail it as a premium for sending us THREE NEW subscribers to the Bee Journal for one year, with $3.00.

This is a splendid chance to get a grand bee-book for a very little money or work.

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For Thanksgiving Day

the Nickel Plate Road will sell tickets within distances of 150 miles, Nov. 23 and 24, at rate of a fare and a third for the round-trip. Return limit Nov. 28. Three through trains daily to Ft. Wayne, Cleveland, Erie, Buffalo, New York, Boston, and New England points, with vestibuled sleeping-cars. No excess fare charged on any train on the Nickel Plate Road. Meals served in Nickel Plate dining-cars, on American Club Meal Plan, ranging in price from 35 cents to $1.00; also a la carte. Chicago city ticket offices, 111 Adams St. and Auditorium Annex. Depot, La Salle and Van Buren Sts., on the Elevated Loop. Telephone Central 2057. 29—45A2t

which some gardening is done. An apiary is located upon it and the attendants put up a tent for their shelter. I surmise the moving is done nights, rests are taken during daytime. The rafts are floated down the rivers during the season. The final stop is made at the end of the season in a section of the country whose timber is scarce. The rafts are taken apart and the timbers sold. Bees and honey are disposed of and the attendants make their way homeward by rail or steamboat.—American Bee-Keeper.

The Use of Smoke in Handling Bees.

In passing from apiary to apiary, looking for foul brood, I am surprised to see how differently men use, or *mis*-use smoke, when handling bees. Some men even ask me if I ever "smoke in the entrances"? As a rule, such men will jar the hives in taking off the cover, then pry or pull off the super with a snap About this time the bees, angry bees, begin pouring out at the entrance, and from the top of the hive, and *then* the bee-keeper begins to use the smoker; but the bees are mad, now, and no amount of smoke will pacify them. The most important place to use smoke, is at the entrance, and it should be used there as the *first step* in opening a hive. Subdue the bees *first*, then all of the jarring will only make their subjection the more complete. So many times has some man cautioned me about attempting to examine some colony, saying the bees were perfect tigers, and that I would be stung terribly. I always say: "Give me the smoker". I give them a good, thorough smoking before attempting to open the hive. I then open the hive carefully, using a little smoke if there is any sign of obstreperousness. As a rule I pass the ordeal without a sting, while the owner looks on with amazement. The whole secret lies in subduing the bees before opening the hive. Smoke the bees *first*, and then you can usually handle them in peace and comfort.—Bee-Keepers' Review.

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MOUNT UNION COLLEGE,
Alliance, Ohio.

CONVENTION NOTICES.

Illinois.—The Illinois State Bee-Keepers' Association will hold its 14th annual session in the G. A. R. Hall at the Court House, in Springfield, Tuesday and Wednesday, Nov. 15 and 16, 1904. We will not lack for music, as the hall, in its furnishings, has a piano, and Dr. Miller has promised to be with us. (You know what that means.) N. E. France will also be with us. He, as all bee-keepers know, is the General Manager of the National Association, and foul-brood inspector of the State of Wisconsin. Also our president, Mr. J. Q. Smith, who has acted as foul-brood inspector for this State for two summers—we surely with reason may expect that with a good attendance at our meeting something will be done to advance the interests of bee-keepers. Editor York, of the American Bee Journal, will be present also. We have a promise of papers from S. N. Black, on "Managing for Comb Honey"; and one by James Poindexter, on "Wintering Bees". H. F. Moore, secretary of the Chicago-Northwestern Association, will present a paper on "Experiences as an Inspector of Apiaries". Others are expected on subjects not yet announced.

Through the I. O. O. F. of Illinois, we get the following rates on all roads under the Western Passenger Association:

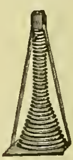
"Rate of one fare for the round-trip from points in Illinois from which the local one-way rate to Springfield is more than $3.00, and an open rate of a fare and one-third for the round-trip, with a maximum selling rate of $3.00, from all points in the State within that radius, also from St. Louis, Mo.; excursion tickets to be sold on Nov. 13-15 inclusive, good to return leaving Springfield until and including Nov. 19, 1904.

"Tickets limited for going passage commencing date of sale and for continuous passage in each direction.

"The Western Passenger Association lines are: C. & A. Ry., C. & N. W. Ry., C., B. & Q. Ry.. C. G. W. Ry., Iowa Central R. R., J. & St. L. Ry., Wabash R. R., A. T. & S. F. Ry., C. M. & St. P. Ry, C., P. & St. L. Ry., C., R. I. & P. Ry., Illinois Central Ry., Wisconsin Central Ry."

On all railroads under direction of the CENTRAL PASSENGER Association rates can only be had through certificate from your local secretaries of Odd Fellows lodges, and we are assured they will be very favorable to including bee keepers in their families, to whom they can issue all the certificates they desire. If nothing else can be done, we advise making your nearest way to the roads named in the Western Association. Come, all bee-keepers, and have a good time. JAS. A. STONE, Sec.
R. R. 4, Springfield, Ill.

Illinois.—The Chicago-Northwestern Bee-Keepers' Association will hold its next annual meeting on Wednesday and Thursday, Nov. 30 and Dec. 1, 1904, in the Revere House, south-east corner of North Clark and Michigan Sts.. Chicago. The prospects are that this convention will be the largest and best ever held by the Chicago-Northwestern. Prominent bee-keepers from a distance have said they were coming. It will be a great time. Everybody



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at all interested in bees or bee-keeping is urgently invited to be present. There will be live discussions of live subjects relating to bee-keeping. Come. It's Nov. 30 and Dec. 1. And Chicago is the place!

Park Ridge, Ill. HERMAN F. MOORE, Sec.

Pennsylvania.—The Pennsylvania State Bee-Keepers' Association will hold its fall convention in Harrisburg, Tuesday and Wednesday, Dec. 6 and 7, 1904. An excellent program has been arranged. Many subjects of vital interest will be ably presented. General Manager N.E. France, of the National Bee-Keepers' Association, will be present, as well as other prominent bee-keepers. Every bee-keeper in Pennsylvania should interest himself in this meeting. D. L. WOODS, Sec.

Muncy, Pa.

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Honey and Beeswax

OUR TOIL DOTH SWEETEN OTHERS

CHICAGO, Oct. 24.—There is not an active market considering the season of year, prices are not strong and may sag in the absence of demand. No. 1 white comb honey, 12½@13c; fancy clover, 14c, with corresponding grades 1@3c less. Extracted, white, 6½@7½c; amber, 6@6½c, according to kind, flavor, quality and package. Beeswax, 30c.

R. A. BURNETT & CO.

KANSAS CITY, Sept. 22.—Market on comb honey is quite active at $2.75 per case for fancy white stock. Extracted rather slow at 6½@7c. We look for the demand on extracted to pick up considerably with cooler weather, Beeswax in good demand at 30c per pound.

C. C. CLEMONS & CO.

BOSTON, Oct. 24.—We are pleased to note an increased demand for honey, which with comparatively speaking, light receipts, makes prices firm. We quote fancy white, 16@17c; No. 1, 16c; with but little No. 2 on hand or to be had. Extracted, light amber, 7@8c.

BLAKE, SCOTT & LEE.

CINCINNATI, Oct. 28.—There is a marked improvement in the demand for comb honey since our last quotations. No material change in the extracted-honey market. We continue to quote white clover extracted honey in barrels and cans at 7@8½ cents; amber in barrels, 5¼@6c. Fancy white clover comb honey, 14@15c. Beeswax, 28c. THE FRED W. MUTH CO.

ALBANY, N.Y., Oct. 11.—The honey market is steady here at 15c for best white comb, and 12½@13½c for buckwheat. The weather is cool and favorable. Extracted, white, 6½@7c—slow; buckwheat, 6@6½c. Beeswax, 28@30c.

H. R. WRIGHT.

NEW YORK, Oct. 8.—There are no new features in the honey market. White honey is arriving quite freely and meets with fair demand at 14@15c for fancy white, 13c for No. 1 white, and 11@12c for amber. Hardly any buckwheat has arrived as yet, and prices on same are not established. First grade of buckwheat honey will sell at from 10@11c. Extracted honey in good demand at unchanged prices. Beeswax market dull and declining.

HILDRETH & SEGELKEN.

PHILADELPHIA, Oct. 25.—Shipments have been quite heavy in the last two weeks. Prices are a little weaker in consequence, although fancy honey maintains a good price. We find the shortage is always in the fancy goods, and the off goods are what overstocks the market. We quote some sales: Fancy white comb, 16@17c; No. 1, 14c: amber and No. 2, 12@13c. Extracted, white, 8c; amber, 6@7c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

SAN FRANCISCO, Oct. 26.—White comb. 1-lb. sections, 12½@13c; amber, 9@11c. Extracted, white, 6@6½ cents; light amber, 4½@5½c; amber, 3¾@4¼c; dark amber, 3@3½c. Beeswax, good to choice, light, 29@30c; dark, 27@28c.

Stocks of choice to select are not large and are being steadily held. For some white extracted from Nevada of very superior quality, as high as 7c is being realized in the filling of small orders. Ordinary extracted from the Hawaiian Islands has been placed recently in round lots at 3c on this market.

CINCINNATI, O., Oct. 20.—Comb honey is now coming in more freely, and prices if anything have moderated a little. The sales made and prices obtained were for No. 1 fancy water-white comb, 13@15c; No. 2, 12½@14c. Extracted is sold as follows: White clover, in barrels, 6½ cents; in cans, 7½@8c; amber, in barrels, 5¼@5½c; in cans, 6@6½c. Beeswax, 27c.

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We are accumulating quite a stock of engravings that have been used in the American Bee Journal. No doubt many of them could be used again by bee-keepers in their local newspapers, on their stationery, or in other ways. Also, if we can sell some of them it would help us to pay for others that we are constantly having made and using in our columns. If there is any of our engravings that any one would like to have, just let us know and we will quote a very low price, postpaid. Address,

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American Bee Journal

OUR TOIL DOTH SWEETEN OTHERS

44th Year. CHICAGO, ILL., NOV. 17, 1904. No. 46.

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A LINDEN OR BASSWOOD TREE IN BLOOM.

(Photo furnished by L. G. Blair, of Grant Co., Wis.)

A Lullaby.

BY EUGENE SECOR.

The bees are in the linden tops,
Bye, baby, bye!
They'll bring the sunshine home in drops,
Bye, baby, bye!
Some they'll put in wax-cups neat
For their cradled ones to eat,
And some they'll keep for baby, sweet,
Bye, baby, bye!

The baby bees are fast asleep,
Bye, baby, bye!
They never fret, they never weep,
Bye, baby, bye!
They lie as still at sunny noon
As stars are still around the moon;
They never hear their mamma croon
"Bye, baby, bye!"

*

The baby bees will wake some day,
Bye, baby, bye!
And go among the flowers to play,
Bye, baby, bye!
And baby mine may have a run
Sometime, and chase them, just for fun;
But now lie still and sleep, sweet one,
Bye, baby, bye.

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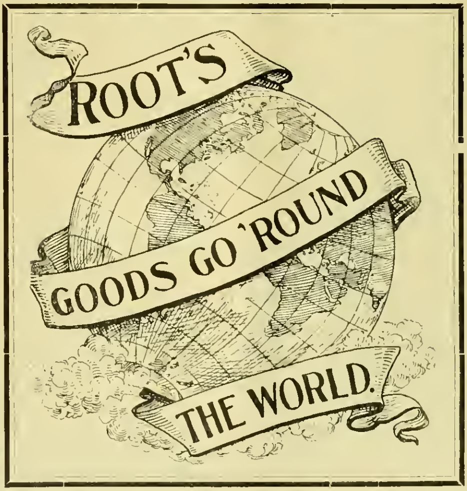

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Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

GEORGE W. YORK, Editor. CHICAGO, ILL., NOV. 17, 1904. Vol. XLIV—No. 46.

Editorial Notes and Comments

Cost of Selling Honey on Commission.

On page 739, reference was made to a statement in the Bee-Keepers' Review that when honey was sold on commission at 14 cents, the consignor could count on receiving only 10 cents a pound, the commission, etc., amounting to 4 cents a pound. With a view to some definite information, commission honey-dealers were invited to help out. One of the oldest and largest honey-selling commission houses in the country, R. A. Burnett & Co., has placed at our disposal account sales of a number of actual transactions, the honey having been received from points at different distances.

In the charges there are three different items, freight or express, cartage, and commission. The charge for cartage is the same whatever the distance from which the consignment has been sent, or the price at which the honey is sold. As will be readily understood, however, cartage on a very small lot will be more *per pound* than that on large lots. On a 500-pound lot it will be about one-tenth of a cent a pound; and it may be less than half that on a car-lot.

Freight is the item on which, of course, there is the greatest variation. It may be nearly 2½ cents a pound on a shipment from California to Chicago, or it may be only a fraction of a cent when shipped a short distance.

As to commission, the commission house says:

> "We charge 10 percent commission on all honey in less than car-load lots; when it comes in car-load lots, and of an even grade, it pays us quite as well at 5 percent as the smaller lots at 10 percent, for it is very seldom that the product of two apiaries runs alike when managed by different owners. It is quite as easy for us (aside from the actual labor) to sell a car-load of honey as it is 100 cases, and sometimes easier than it is to sell 10 cases, if they happen to be from different consignors."

A few representative examples may here be given. In each case the honey was sold at 14 cents, and the distances are given in a bee-line. Of course, the real shipping distances are considerably greater. The shipments are of comb honey. The total charges on a car-lot from Los Angeles, Calif., were 3.12 cents a pound. On a small shipment of 549 pounds from a point 115 miles distant, the charges were 2.06 cents. On 1276 pounds from a point in Michigan 300 miles distant, 1.96 cents a pound. On a carload from a Wisconsin point 165 miles distant, 1.026 cents.

It will thus be seen that the heaviest bill of charges, which was for an exceptionally long distance, lacked ⅞ of a cent of being 4 cents a pound, the lightest being practically only a cent a pound. It will also be seen that the remark on page 739, that "if the distance be sufficiently great, the slice taken off the 14 cents may be a good deal more than 4 cents", is hardly justified by the figures given.

Wiring Frames Growing in Favor.

Years ago there was decided opposition among Canadian bee-keepers to wiring frames, but it seems to have forced its way into favor. J. B. Hall, one of Canada's foremost bee-keepers, is reported in the Canadian Bee Journal as saying:

> "I kicked against wiring for 15 years, and four years ago I put in 600 wired frames, and was so pleased with them I put in 800, and last year 900."

Canadian Honey in England.

Our friends across the northern border are to be commended for their enterprise. In the honey show of the Confectioners' Exhibition, held in London, as mentioned by W. Woodley in the British Bee Journal, there was a grand exhibit of Canadian honey including "a large parcel of fine section honey". An English firm had bought all this honey before the show opened. A point of special interest was that the honey was staged as an exhibit of the Canadian *government*.

"Columbus" or Tin-Foil-Base Comb Foundation.

Years ago J. Y. Detwiler conceived the idea of using tin-foil in the middle wall of comb foundation, sending out samples of the same; but it never went into general use, and nothing has been said about it lately. Now the same thing has been brought out as a new thing in Germany by an extensive comb-foundation maker, Otto Schulz, and he has applied for a patent in this country. It is claimed to be indestructible, no wiring nor other support being needed aside from the metal base. Even the wax-worm can not pass *through* it.

Notwithstanding the previous failure in this country, it is possible a success may be made by properly using the new foundation, although it seems hardly probable that a patent on it could hold. The bees accept and use it without question, but where any of the metal is exposed, as at the edges, they are likely to gnaw away still more the wax. To avoid this, special pains is taken to have not the least part of the tin-foil exposed. One way is to have the brood-frames split in two, the foundation placed between, and the two parts of the frame then nailed together. Another way is to use the ordinary frame, letting the foundation completely fill it, then run melted wax entirely around the edges.

There still remains the question whether accidental exposure of spots of the metal, giving the bees a start at gnawing away the wax, may not occur with such frequency as to rule out this so-called Columbus foundation.

The Chapman Honey-Plant.

This plant—Echinops spherocephalus—a few years ago enjoyed no little prominence as a candidate for the favor of bee-keepers, but has now sunk into obscurity. However good it might be as a honey-plant, it is not likely that it will ever pay to occupy good land with a plant that has no value in other respects. But it appears that in England there is some show that the Chapman honey-plant may secure a hearing for its values aside from nectar. Walter T. Reid says in the British Bee Journal:

> "It furnishes an excellent vegetable in the early spring, and one that can be easily grown on almost any soil. The young shoots should be well blanched like sea-kale, and cooked in a similar way. The flavor reminds one of sea-kale with a slight resemblance to asparagus. A succession of shoots may be obtained through the summer by cutting down the main stems near the ground. The blanching should be complete, the least trace of green color carrying with it a bitter taste. The stems of the mature plant are long and strong, and are very useful in the garden as supports for flowers, tomatoes," etc.

Miscellaneous News Items

Our Northwestern Trip is omitted this week owing to much other matter for this department. Next week we hope to find room to continue it. We are also getting together some illustrations to accompany the descriptions of the firms and their factories.

"We Be Brethren" in Bee-Keeping.—As a sample of good comradeship among rival bee-papers, here are two paragraphs worth reproducing, written by the editor of the American Bee-Keeper, Harry E. Hill, the man who has done such good editorial work at a 1000-mile range:

> "We have not a single name upon our list which is not esteemed, and we should like very much to be able to have each and every one remain with us while we continue to add many others, so that a better and larger journal may the sooner become possible; but we delight in the thought that we have several most worthy, bright, clean and valuable competitors in the field with (not against) us, and all merit patronage and success.
>
> "We want thousands more to take the American Bee-Keeper, and hope they may do so; but we are disinclined to insult our intelligent readers by telling them that this is the only worthy bee-journal published. There are others, and we are glad of it. We wish them all success."

This courteous utterance of Editor Hill was inspired by a certain new bee-paper editor suggesting that his paper be taken by bee-keepers and the older papers be dropped. That meant that after the older papers have helped to build up the industry of bee-keeping to a success, then the new papers will enter into their (the older papers') labors and try to usurp their places! Well! well! who'd have thought it?

National Nominations and Candidates.—On page 740 we mentioned the fact that W. Z. Hutchinson had made public an explanation of his circular-letter request to the members of the National Bee-Keepers' Association to vote for him for secretary. Since then we have received the following from Mr. Hutchinson, with the request that it be published:

EDITOR YORK:—I notice that you refer to the explanation that I made in Gleanings regarding my candidacy for secretary. It is all right that you do this, as I wish all the members to understand the matter thoroughly, but there is one point where I fear a wrong conclusion might be drawn, and that is where you say the circulars were sent out to a "selected list". It might be thought that they were sent to those whom I thought were my friends, or who would vote for me, and withheld from others, which was not the case. I had a list of members that I went over some two or three years ago, and checked off the names of those who were not subscribers, sending sample copies to this list. In sending out the circulars they were not sent to the whole membership, as it was thought that the same results would be secured were they sent to half of them, and much expense would be saved, so they were sent out to those who were not subscribers to the Review. Of course, a name here and there might hade been overlooked when comparing the lists two or three years ago, and quite a number have subscribed since then, but the attempt was made, as far as possible, to send them to those who were not subscribers, as they would be, in a certain sense, an advertisement. I can see now, although it did not occur to me at the time, that sending them to part of the members might cause trouble, but, agreeing with you most thoroughly in regard to avoiding as much as possible, all trouble and dissension in our ranks, I at once withdrew my candidacy as soon as I saw how it was being looked upon. I did it for the sake of harmony. I am willing that the members shall know all about it, but I would not like to have them think I was working any sort of "scheme", as such was not the case.

Having said this much by way of explanation, please allow me to say that I think there ought to be some way of discussing candidates and nominations. If an officer does not wish re-election, there ought to be some way in which he can make it known. If a man desires an office, there ought to be some way in which he can make that known. If a man knows of some man who will, in his estimation, be a suitable officer, he should be allowed in some way to make this known, and so on. In politics, possible candidates are discussed pro and con before there are any nominations. Last summer I received a circular from the Master of our State Grange, asking me to work for his nomination. Perhaps we are not yet ready to adopt political methods, but I do think there should be some way of discussing these matters in advance of the actual nominations. Seems to me it might be done in the journals. Making nominations in advance of election is one step in advance, in that two candidates are presented for election. This would enable us to vote out of office some undesirable officer. It does not help us, however, in comparing candidates.

In our State Associations, where about the same men meet year after year, and become well acquainted, it is possible to elect the best men to office, but in the National Association there is a lack of this intimate acquaintance with all of the membership, and a tendency to elect the most popular or best known man—perhaps some man who writes a great many articles, or the editor of a bee-journal. These men may make good officers, and they may not. Because a man is well known and popular is no sign that he would make a good officer.

Perhaps this is not the time and place to discuss these matters, but before another election I think they ought to be freely discussed. It seems that I made a mistake in this matter, and some decision should be arrived at that others may avoid similar mistakes. W. Z. HUTCHINSON.

We fear Mr. Hutchinson emphasized that word "selected" a little too much when reading the item on page 740. We did not mean to intimate that he was working a scheme on the membership, and yet when we learned that quite a number of the more prominent ones had not received his circular letter, it did look as if it had been sent to a "selected list". In reality it amounted to that, even though the list was made up for another purpose a year or two before. But we do not see that there was any particular scheme about that.

In reply to Mr. Hutchinson's remark that there ought to be some way to make it known when an officer does not want to be re-elected, we would say there are at least two ways that we think of now. One is for such officer to mail a circular letter to the membership and say that he will no longer serve as an officer. The other, and more economical way, is simply to send such notice to all the bee-papers, and they will doubtless publish it without charge. They will be glad to do so especially if that officer is unfit for the position, and should be superseded by a better one.

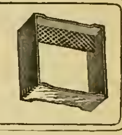
Again, as to a man *desiring* an office, and also desiring to make it known, the best way to do in that case, we think, is for him to confide it to his wife. That's the safest way. For if the membership of an organization desires a certain man for any office they will see that he gets it. It's ever so much better for it to come in that way. Let the office seek the man, not the man the office, is a most excellent method to follow.

So far as we can recall, the National Association has never suffered in its officiary except when an attempt was made to use political tactics. Then there was trouble, and we predict that there always will be when such methods are resorted to. There is no necessity for it in the National. There is no office in its gift that any one need worry about, whether he secures it or not.

The National Association belongs to the whole of the 2000 or more members, and we believe the great majority will see to it that justice is done those who are worthy. No one man or coterie of men are essential to the success of any organization. Officers are always servants, and not masters, of their constituents.

Personally, we feel grateful to the National Association for the honors it has conferred on us, and also for the opportunity we have had to help make it what it is to-day. We want only to see it go on to greater numbers and larger usefulness, not alone to its membership but to the whole bee-keeping fraternity. And we expect to continue to aid it in fulfilling its high mission. We are willing to trust its great rank and file. They are all right.

Contributed Special Articles



Life of the Worker-Bee—Some Stories.

BY C. P. DADANT.

An apiarist writes me concerning the article by Mr. Doolittle, on page 710. He wants to know whether I think Mr. Doolittle right in placing the life of the worker-bee, in the summer, at so short a period. I wish to say that my personal experience on this matter is almost identical with that of Mr. Doolittle. All who have had any experience with the introduction of queens in colonies of a different race have noticed over and over again that, within three summer months, the bees will be entirely changed. So it is evident that the average life of a bee does not exceed 40 days when she is at work. Accidents kill them, or they wear themselves out.

I will also concur in his statement concerning superseding queens. We used to go to a great deal of trouble in superseding old queens, but at present we change a queen only if she is considered of no value, for lack of prolificness. The bees attend to this matter themselves before the queen gets too old.

There are, however, some things on which my experience does not tally with that of Mr. Doolittle. Perhaps it is owing to location. For instance, I have never been able to find any evidence that bees traveled more than two or three miles usually in search of honey. We have a very varied flora here. A portion of our bees are located on the hills or in the prairie away from the river, while others are close to the lowlands that abound along the Mississippi. We have invariably found that apiaries located four miles apart in different conditions harvest different kinds of honey. For instance, we have had an apiary about three miles from the Mississippi lowlands that never harvested any quantity of honey from those lowlands. On the other hand, bees located near the lowlands where white clover was scarce, would almost invariably fail to harvest a white clover crop.

It is quite possible that this difference in results is due to the configuration of the country. There may be other reasons, but I believe this to be the principal one. The direction that the winds take usually has something to do with the direction in which the bees travel. A bee will go more readily in the direction in which it is easiest to fly, where the shape of the hills and the location of the woods least interferes with its flight. It will also go more readily against a fair breeze than with it, this because it gets the odor of the blossoms from the direction whence the breeze comes. But in this location, with everything the most favorable, as far as I could perceive, I never met any of our bees to a number worth mentioning at a greater distance than three miles. Though it is perhaps likely that the bees may be attracted farther, I do not believe that in Illinois, along our streams, it is worth while to depend upon the bees harvesting any crop worth mentioning at a distance exceeding three to four miles.

MANUFACTURED COMB-HONEY STORIES.

The stories concerning the manufacture of comb honey have at last crossed the Atlantic and reached the shores of Europe. The June number of the Bulletin of the Society Apiculture of the Somme, contains a quotation from the Journal des confiseurs (the confectioner's journal), mentioning the existence of a honey manufactory making comb honey with paraffin cells. It is said that only a practiced eye can detect the fraud, and that the honey has the appearance and the flavor of true honey. Such reports ought to be branded with the denunciation of falsehood. Yet the paper does not make any protest.

It is true that the supposed adulteration of comb honey, which we fight here, has not the same importance in Europe as it has here, for most of the honey is sold in the liquid form. The production of honey with the extractor ought to make rapid strides in those countries since extracted honey brings about as high a price there as comb honey, but the Europeans are so slow in taking hold of new things that people are still to be found who dispute and discuss the advisability of extracting the honey by centrifugal force, and saving the combs for future use.

I find in the same journal a little story that seems to have been going the rounds of European bee-journals, and is worth repeating. Here it is:

"Lord Cecil is a lover of bees, but his pet pursuit gave quite a little trouble to the folks in his city. It appears that he had a queenless colony and telegraphed to a neighboring city for an Italian queen from a breeder there. As he was to be away, he asked to be informed in proper time of the arrival of the little insect. To satisfy him, the shipper wired, 'The queen will reach your station at 3:40 p.m.' On his arrival at the station, at the indicated hour, he was much astonished to see a crowd of people in their best clothes. The mayor was there in a frock-coat, and a band was playing its finest tunes. Upon inquiry, he ascertained that one of the telegraph operators had been indiscreet enough to give out the announcement of the arrival of the Queen at that hour. A few words of explanation dispersed the disappointed crowd."

I find but one fault with this story; no one will vouch for its truth. Hancock Co., Ill.

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Cleaning Unfinished Sections of Honey, Etc.

BY EDWIN BEVINS.

On page 707, is an editorial advising bee-keepers to get their unfinished sections cleaned out by the bees in the fall. This is good advice, and should have been given a month earlier. I had all of mine (more than 2000) cleaned by Oct. 20. The method of procedure advised in the editorial referred to, is too wasteful in practice for me, and I am sure it is for any bee-keeper who has some colonies in his yard that need to be fed for winter. What yard of any magnitude is there that has not some colonies with insufficient stores? I have described my method in the American Bee Journal once or twice, and will outline it again.

I first fill a super with unfinished sections after uncapping all that have any sealed honey, then I spread a piece of burlap over the brood-frames so as to cover all but about 2 inches at the front end of the hive; then set the super on the hive and cover it up tight.

Do this work near the close of day. If the covers are not tight, and if you try to do the work at midday, you may be sorry. I have not had any robbing.

Miss Wilson, Mr. Hasty and Mr. Baldwin have written in a way to indicate that they did not have success in trying to get sections cleaned in the fall by the above method. I confess that I do not see why, if they began early enough. I have had success with the method for several years.

PERFORATED-ZINC AND COMB HONEY.

In some late issues of the American Bee Journal I have noticed that C. P. Dadant has been questioned a good deal as to the reasons why he does not have to use bee-zinc when producing comb honey. The reason is not far to seek. He uses brood-combs so large, and so many of them in a hive, that the queen has room to deposit in the brood-chamber all the eggs she is capable of laying. I have used some of the Dadant hives (which, as is well known, take 10 Quinby frames) for 10 or 12 years in the production of extracted honey, and I have never had to use queen-excluders on them, while I have always had to use them on the 8 and 10 frame Langstroth hives.

For the minimum of labor and the maximum of results in surplus honey (given the right kind of queens), I believe the Dadant hive to be unsurpassed. If I were running out-yards for extracted honey, I would want nothing better, as I could feel all the time pretty sure that I would not lose swarms enough to hurt if no one was present in swarming-time, and that my presence in the yard would not be needed many times in the course of a season.

COMB-HONEY SUPER CAPACITY.

I notice that Mr. Doolittle does not regard kindly a hive that for extracted honey does not take a super of the same capacity as the brood-chamber. Of course, a super as large as the brood-chamber would be out of the question when the Dadant hive is used for a brood-chamber. If Mr. Doolittle were producing extracted honey, and desired to reduce swarming to almost nothing, and wanted to avoid the use of excluders, and also wished to make his visits to the apiary infrequent, I will venture the opinion that he would adopt a hive of the size of the Dadant, and that on these hives he would use supers taking frames about 6 inches deep.

I know something of the advantages and disadvantages of full-depth supers on the 8 and 10 frame Langstroth hives, but the labor required for the production of honey in these hives is away beyond what is required in its production by the Dadant method. I know that some bee-keepers use the Langstroth hives and full-depth supers, and allow the queens to roam at will through all of the stories throughout the season.

These are a class by themselves, to whom I have nothing to say. My remarks are intended for those whose aim it is to keep the queens out of the supers. My experience goes to prove that this result can sufficiently well be accomplished by the use of the Dadant hive as a brood-chamber.

Those who are averse to the use of bee-zinc, and yet would not like to have brood in the extracting-combs, will, I am sure, be pleased with the results of using these hives.

FALL REQUEENING—THE NATIONAL CONVENTION.

At this writing (Oct. 29) I have just finished requeening the colonies that did not swarm and did not do good work in the supers.

The writer was a looker-on in St. Louis, Sept. 27, 28 and 29, but was too ill to attend all of the sessions of the National convention. He noted with pleasure that the meeting had an efficient presiding officer, and that this presiding officer had an efficient right-hand man. He was also amused at the desperate endeavors of one individual to choke off some men in the audience who were consuming time by irrelevant and random talk. His success was not great, but I wished heartily that it had been greater.

Decatur Co., Iowa.

Proceedings of Conventions

Report of the Southwest Texas Convention.

BY W. H. LAWS, SEC. PRO TEM.

The Southwest Texas Bee-Keepers' Association met in San Antonio at 9 a.m., Oct. 28, 1904.

Pres. H. H. Hyde called the meeting to order, and W. H. Laws was appointed secretary *pro tem.* After the opening remarks and some informal discussions, the program was taken up.

The following paper was read by W. H. Laws, of Bee County, on

SUCCESSFUL MANAGEMENT OF OUT-APIARIES.

To be able intelligently to tell in this article how to manage a series of out-apiaries successfully, one must first of all have had success himself.

Since it has been my fortune to deal with out-apiaries, and out-apiaries only, I might tell how I have managed to get a fair crop of honey each season, as well as give my plans for the season to come.

An important item in the successful management of out-apiaries is the location of the apiaries themselves with regard to convenience and time saved in going from yard to yard. It is evident—and that for various reasons—we can not always place our bees where the greatest convenience for working them can be considered. The apiaries themselves should be placed in line, or two lines, rather, in the form of a circuit, where one trip to the farthermost yard will take the operator by one line of yards on the outgoing trip, and by the other on the return trip.

As many colonies should be kept in each yard as the location will profitably admit.

It should be the exclusive business of the keeper of numerous out-apiaries to look after his bees, especially in the spring and honey seasons. Certainly he should not mix other business with his bees, for no man can keep a thousand colonies of bees in out-apiaries, mix in other business, and be a successful bee-man. If he must increase his business let him keep more bees. He should even leave the gardening for the "lady of the house" to superintend.

It is decidedly best that a camping outfit be prepared, with a wagon and team, and during the busy season live most of the time with the bees, being certain to spend all Sundays at home with the family, and, if possible, attend church and Sunday-school with them. While this may not appear to be a part of the successful management of out-apiaries, yet I believe the keeping of the Sabbath, and rest from all labors of a secular nature, has a tendency to rest one's mind, and gives greater zest for the following week's work, for

> "A Sabbath well spent,
> Brings a week of content", etc.

The spring management of out-apiaries is not unlike that laid down by our best writers, suffice it to say that a part of this management should begin the previous fall; with young queens and plenty of stores all will surely go well until we strike that awful snag of swarming in out-apiaries. Here's where the out-apiary man's work begins in earnest; and I will say that this is by far the most knotty problem that confronts the man that tries to manage successfully out-apiaries. We must work our bees to have the minimum of swarming.

In the production of bulk-comb and extracted honey, by proper manipulations swarming can be practically controlled—by the spreading and scattering of brood, making artificial increase, and by the "shook swarm" methods. These manipulations, to prevent swarming, might also be applied to the producer of comb honey in the one-pound sections.

One of the most important points is to have all colonies strong in bees at the beginning of the honey-flow, and if we can keep down swarming until the honey-flow begins all will be safe, as a heavy flow of honey almost invariably cuts off all desire to swarm.

The bee-keeper's attention is now turned to directing the best efforts of the little workers, giving frames of foundation and necessary room at the proper time. With 10 yards of 100 colonies each on his hands, even with efficient help he may expect to work days, and drive several miles after night. It is economy to have plenty of good help at this time in order to keep up all parts of the work, for a delay at this most critical time means irreparable loss, for the honey-flow is passing, and it is absolutely necessary that the proper room and attention be given when needed. All hives, supers, frames, etc., must be on the ground, and in good condition long before this date. Boxes of foundation can be stored at the yards, or can be carried from yard to yard as convenience or necessity demands.

A few weeks of this sort of work and the honey-flow is over. The honey is then left on the hives until it is thoroughly ripened and sealed.

The great rush over, we can take our work a little easier, but if the flow has been good there is much and heavy work ahead of us in the taking off and preparing our product for the market. At each yard there is honey to be extracted, combs to be cut out and fitted into cans, cleanly and neatly done.

We have an extracting tent built in the form of an inverted box, 14 or 16 feet square, with 5-foot ropes attached to each of the four corners, also one rope attached to the center of the cone-shaped roof, which is thrown over the limb of a tree and drawn to the proper hight. The corners of the side walls are then drawn out to the proper position, and the ropes are tied to posts already prepared. A double fold of the cloth for a door near one corner is left unsewed for this purpose, and in two minutes our bee-roof tent is erected, and in like time it can be taken down, folded and put into a sack ready for transportation to the next yard. After the tent is set a first-class reversible Cowan honey-extractor is placed in position and thoroughly anchored. Then, with keen uncapping knives and honey-vessels on hand, we as systematically as possible remove the honey from the hives, taking it into the tent, where, by the helpers, it is prepared and packed as the nicest, purest, and best article of commerce that comes from the State of Texas.

This is a brief outline of the most important of the work I have been following, and expect to follow the coming season. Doubtless many of you have some shorter cuts, and perhaps better methods, all of which we wish to hear discussed.

W. H. LAWS.

Mr. Stachelhausen told how, by the use of the shallow frame, he tried to overcome the swarming propensity of the bees in out-apiaries, and, unlike the writer of the foregoing paper, all the honey from his out-apiaries he hauled to his home honey-house, where it was then extracted, combs cut out, and placed in cans and prepared for market. The combs from which the honey was extracted were afterward hauled out and returned to the bees from which they were taken. His crop this season—all bulk comb—was 20,000 pounds.

Mr. Hyde then told that they had an extracting-house on wheels, and this was taken to the out-yards, the honey extracted, combs at once returned to the bees, the honey barreled, and the comb honey hauled home and packed for market at their leisure.

Messrs. Victor, Knolle, Will Atchley, Powell, and others, practically agreed with the writer of the paper, and practiced the same plans of management with some little variations.

W. O. Victor then described his bee-tent, which was identical with that of Mr. Laws.

(Concluded next week.)

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses. By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

BUILDING WALLS AROUND HOMES.

Garden walls in Ireland—what substantial things they are sometimes! They say not only, "Beasts keep out", but, "Men keep out"; and, "Fellow men, you must not even see in. This is *our* garden". Needless to say that I like the tone and spirit of Ohio, as it used to be 50 years ago much better than this. The Ohio of to-day is getting to be an Ireland fast. And when we get fortress-like walls around our gardens then the east and south aspects will be nice places to string along bees. Page 679.

OBJECTS OF BEE-KEEPERS' ASSOCIATIONS.

As to the objects of bee-keepers' associations, perhaps Ireland is morally ahead. They openly propose—some of them do—to better the condition of cottagers by getting them to keep bees. Such a policy would be voted down in some of our associations, I surmise. But they have over there also the society which speaks only of the benefit of its own members—and you have to hold $5.00 of stock to be a member. Well enough to bear in mind that (like the sheep and goats of the last day) associations are of two kinds. Some are self-seeking and some are public-weal-seeking. All right to be both in one if *honestly* so. Page 678.

THAT CONFECTIONERY "PASTE".

The "Paste of Marshmallow Root with Honey", on page 682, is not a new device to keep labels from peeling off bright tin, but a confectionery to eat—something on the style of jujube paste. I suspect some readers got mixed on it.

RENT PAID FOR AN OUT-APIARY.

It is of interest to hear that many people in Texas will not take pay for letting an out-apiary stand on their property. And the bee-folks have partly settled it that 10 cents per hive is the proper standing-room rate, where the land-owner wishes to be paid. They are all right to remind each other to give liberal presents of honey to land-owners who refuse pay; but I would go further, and say, give a nice present of honey now and then to the man who takes his 10 cents a hive. He is not a hog by any means; and his cordial good-will is very desirable indeed. Prove to him that *you* are not one of the sod-turning brotherhood.

We scratch our heads to hear that one large land-owner is paid $30 for the bee-rights of his tract, *with the stipulation that nobody else be allowed to place bees.* Who shall say we are not coming on in the actual solution of an important and vexed question? Here's a chance to do some thinking, and decide whether we will approve, or throw clubs. Page 681.

AMOUNT OF WAX TO HOLD ONE POUND OF HONEY.

I incline to quarrel with Dr. Miller's answer 11 on page 683. My memory is bad, but I *think* the last time I took weights of melted-up comb honey it was not over 40 pounds of honey to one of wax (if, indeed, it was much more than 20). Sometimes bees draw their wax-films much thinner than the usual thickness; but I feel pretty sure that nothing near 200 pounds of honey are ever stored with one pound of wax.

EXAMPLES OF QUEENS NOT TRANSMISSIBLE.

I suppose Arthur C. Miller can not devise any way whereby the *example* of his excellent queen can be made effectual upon our queens. Even upon that queen's own daughters the example, and the inheritance both, are likely to be something less than sweeping. A queen that won't lay in drone-cells is not likely to lay in anything bigger; and so we would hope to have undesirable swarming cornered. Still possible, however, for the workers to take the bits in their teeth, and go to building queen-cells over the ordinary brood. Page 692.

TOO MUCH RAIN IN NEVADA!

Sounds queer to hear Nevada complain of too much rain, and queer also that California raisins and lima beans should be destructively rained on. I should fear that the effect of such untimely rains would not last till the next honey crop is due. Pages 684 and 685.

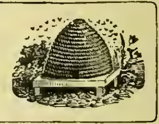
THAT BASEBALL-LIKE HONEY-HAND.

That honey-hand looks as though bees contemplated playing baseball. They are not heavy hitters; but they make their hits count—notwithstanding they are forever "on the fly". And a score of 150 will be quite a change from the 2 to 0 games now in vogue. Page 689.

NOMINATION FOR THE NATIONAL.

There has been a good deal of scolding about the ways and doings and goings of the National Association; but it's hardly worth while to scold much more about the nominating method as practiced on page 692. Hardly possible to devise anything quite equal to the actual presence of the voters. This looks to me to approximate it about as well as anything we can expect.

Our Bee-Keeping Sisters



Conducted by Emma M. Wilson, Marengo, Ill.

Prevention of Swarming—Extracted vs. Comb.

In the Housekeeper, Mrs. Leona Williams discusses prevention of swarming, and at the same time makes a strong plea for extracted as against comb honey. She says:

> "One of the greatest problems a beginner in bee-keeping has to solve, is how to prevent swarming, and bees kept for extracted honey are not much given to it. They are kept so busy filling up the big combs with honey that they haven't time to think of it. And, again, they like a hive with big slabs of honey so that a large number of them can cluster on them and work together. Bees like a hive like a great, big, hollow tree."

To all of this the sisters will give nods of approval, but there will be some shaking of heads as she proceeds:

> "They abhor the little pound boxes for comb honey; the partition fences used keep the comb nice and straight, but with only room enough for one bee to pass in and out, and more often than not they get disgusted, quit work and swarm. One colony of bees run for extracted honey and brushed or shaken when necessary—a process easily learned and as easily accomplished—will give more profit than 10 colonies run for comb honey and allowed to increase by the natural process. In fact, there is seldom any profit in the latter, as the necessary hives, supers, etc., which must be bought every year will eat up all the profit."

That phrase, "with only room enough for one bee to pass in and out", hardly sounds as if written by a practical bee-keeper, but rather as if by one who, having got her facts at second hand, had got them a little mixed. Does any one use any kind of arrangement for comb honey that allows "only room enough for one bee to pass in and out"?

The comparison is made between a colony run for extracted honey with shaken swarms and colonies run for comb honey with natural swarms; the writer evidently thinking that shaken swarms can be used only with colonies run for extracted honey. As a matter of fact, shaken swarms can be used for one just as well as for the other, and the probability is that the greater proportion of shaken swarms is with comb-honey colonies.

That 10 to 1 ratio is pretty strong, isn't it? But, according to the next sentence, it is hardly strong enough, and probably ought to be made "16 to 1". For hives and supers, which will last years when used for extracted honey, must be bought new every year if used for comb honey! No wonder that they "eat up all the profit". The only wonder is that so many of the veterans keep on year after year producing comb honey without any profit. Mrs. Williams says further:

> "Admitting that comb honey sells for, say one-third more than extracted, there is less preference for it every year........The demand for comb honey is lessening, while for pure extracted honey it is increasing."

Is there anything very gracious in the admission that comb honey sells for "one-third more than extracted"? That is, 33⅓ percent more. Let us get some exact figures. Turning to page 751 of this journal, we find quotations given for both kinds of honey by the pound at seven different places. Compare the highest price of comb with the highest price of extracted in each case. Instead of being only 33⅓ percent more than extracted honey, we find that it is more than twice that at Cincinnati, the place where extracted is the highest in proportion, and the highest in reality, of all the places. The actual list is as follows:

In Cincinnati comb honey is 76 percent higher than extracted.

In Chicago, 86 percent higher.
In San Francisco, 100 percent higher.
In Boston, 112 percent higher.
In Philadelphia, 112 percent higher.
In Albany, 114 percent higher.
In New York, 130 percent higher.

Thus it will be seen that in more than half the places the price of comb honey is more than twice as much as the price of extracted. Average the whole, and comb honey brings 103 percent more than extracted.

If demand for comb is lessening, and increasing for extracted, there should be a corresponding lessening in the price of one and rise in the price of the other. Comparison of past and present prices does not make a very strong showing in that direction.

Here is a good thing from Mrs. Williams to wind up with: "Never destroy a frame full of comb; every one is worth many dollars".

Somnambulist quotes this in the Progressive Bee-Keeper, and pithily remarks, "Pretty stout for a woman in a woman's journal". Well, yes, rather.

Send for Our 1904 Catalog and Price-List.
OUR HIVES AND SECTIONS
Are Perfect in Workmanship and Material.
By sending in your order NOW, you will SAVE MONEY, and secure prompt shipment.
We will allow you a cash discount of 5 percent on orders sent in during November.
PAGE & LYON MFG. CO., New London, Wis. U.S.A

Reports and Experiences

Protection for Bees in Winter.

I endeavored, about a year ago, to describe my home-made winter-cases to the readers of the American Bee Journal, placing especial emphasis upon their cheapness and the success I have had in their use in wintering my bees on the summer stands. I wish now to speak of the protection from the wind I give the bees in winter.

I keep about 32 colonies, the hives placed in pairs, four pairs in a row, and four rows 10 feet apart. They occupy a space about 32x40 feet square. I bought 30 pine boards 1x12x16, enough to build a fence 4 feet high around three sides (I leave the south side open). This fence I put up temporarily in the fall, using 8-penny nails, but not driving them clear into the boards to the head. The posts are not set in the ground, but placed on top of it, and braced on the inside by driving a peg in the ground and nailing a light brace from it to the top of the posts. The corners are so close that but little bracing is needed, the corners bracing themselves.

When the warm weather comes in the spring I draw the nails with a claw-hammer and stack the boards and posts away in a protected place. I have used the boards I now have for five winters, and they are yet "just as good as new". I attribute a good deal of my good success in wintering to this windbreak. A. J. KILGORE.

Wood Co., Ohio, Nov. 3.

Wintering Bees—Porter Bee-Escape

On page 505, our genial critic, Mr. Hasty, takes notice of the length of time my bees were in the cellar (165 days), as reported on page 446. It may be of interest to bee-keepers, in this connection, to know that they were wintered almost entirely on sugar syrup. The preceding year there was no honey-flow after Aug. 1. By the first of September some of the most populous colonies were entirely destitute of stores. They were fed an average of 20 pounds of sugar per colony. In the spring I had to feed 5 pounds more per colony. This was barely enough to bring them to the early flow from dandelions, willows, and later on white clover.

Nine of my 10 colonies wintered perfectly; the other one was weak in bees and continued to dwindle, even losing its queen. Later on I gave it

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With a telephone in the home the farmer is in close touch with the whole world. It proves the handiest thing on the farm and we prove
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are the most economical to buy. Strong in mechanism — strong in talking qualities and guarantee. Send for free book F-80 "Telephone Facts for Farmers." It proves our claims. Address nearest office.
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IT IS A FACT
that poultry pays a larger profit for the money invested than any other business; that anybody may make a success of it without long training or previous experience; that the Reliable Incubators and Brooders will give the best results in all cases. Our 20th Century Poultry Book tells just why, and a hundred other things you should know. We mail the book for 10 cents. Write to-day. We have 115 yards of thoroughbred poultry.
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Henequin is the fibre plant from which so many men in Yucatan have become millionaires. Bee-raising and henequin go well together. Write for particulars.

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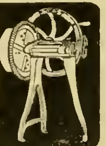
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is the simplest, fastest and easiest bone cutter made. Price $5.00 up. Sold on 15 days trial. Satisfaction or no sale. Send for price book and *Special Proposition*.
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BEE-KEEPERS! Send me your orders for BEE-SUPPLIES for next year's use, and get the discount: Oct., 6 percent; Nov., 5 percent; Dec., 4 percent. The above discount does not apply to honey-packages. Send for catalog. W. J. McCARTY, Emmetsburg, Iowa
44Etf Please mention the Bee Journal.

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(If you are not now a subscriber to Gleanings)
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We have made arrangements with the publishers of Gleanings in Bee-Culture (issued twice a month), so that we can furnish that magazine with the Weekly American Bee Journal—both one year for but $1.60; provided you are not now a subscriber to Gleanings.

This is a magnificent offer, and should be taken advantage of by all of our readers who are not now getting Gleanings regularly. These papers, although on the same subject, are conducted so differently, and contain such a variety of reading matter, that every bee-keeper should have them both. And they can be had for a whole year for $1.60. Address all orders to

GEORGE W. YORK & CO., CHICAGO, ILL.

one frame of brood, bees, and a queen from a strong colony, from which I intended to make my increase. With this help it built up strong in time for basswood bloom. I devoted 8 colonies to the production of extracted, 1 to comb honey, and the other to increase. I secured 1300 pounds of extracted and 125 pounds of comb honey. For increase I divided the one colony into 4 nuclei, retaining some bees for the old hive. My old queens were all clipped, and all swarms returned to their own hives with but little trouble. The first swarm came out June 15, and by July 5 the swarming was over except in the case of the one weak colony.

I found the Porter bee-escape quite a help with some colonies, which would nearly all be out of the supers 24 hours after the bee-escape was put in place, while in case of others there would be several thousand bees in the supers 48 hours after placing escapes.

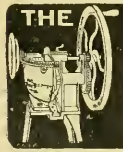
My bees were very cross, sometimes literally driving me out of the yard. But after getting a Jumbo Corneil smoker I fared better. My queens live only one year. They are all superseded at swarming-time, or about the close of the honey-flow. This gives me young queens which fill the hives with bees for winter.

I would not be without the American Bee Journal. F. L. Day.
Becker Co., Minn., Oct. 29.

Good Honey Crop—Hives.

I commenced the season with 39 colonies, and increased to 70 by natural swarming. I did not get much white clover or basswood honey on account of too much rain and cold nights. But a good flow of fall honey commenced Aug. 8, and lasted till Oct. 22, or till the bloom was completely gone.

I had 3 colonies that did not swarm that stored 180 pounds each. I had 3500 sections and 1200 pounds of box



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HUMPHREY,
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Poor People
will be supplied by the Salvation Army throughout the U. S. Will you help by sending a donation, no matter how Small to the
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Headquarters
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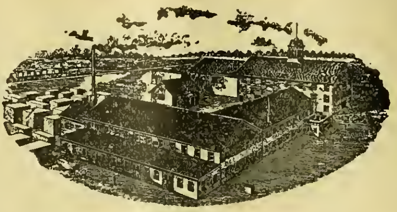
450,000 TREES
200 varieties. Also Grapes, Small Fruits etc. Best rooted stock. Genuine, cheap. 2 sample currants mailed for 10c. Desc. price list free. Lewis Roesch, Fredonia, N.Y.



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Also AMBER EXTRACTED
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Quote your lowest price delivered here. WE REMIT PROMPTLY.
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Some Good Clubbing Offers.

A good many subscriptions to the American Bee Journal should be renewed at once. We wish to call special attention to the following, which we are sure will commend themselves to many of our readers:

No. 1—	The Bee Journal and Dr. Miller's "Forty Years Among the Bees" (book alone, $1.00)................	Both for $1.75
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No. 4—	The Bee Journal a year and Doolittle's "Scientific Queen-Rearing," (cloth bound) (book alone, $1.00)....	" 1.75
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No. 7—	The Bee Journal a year and a "Novelty Pocket-Knife" with your name and address on it (knife alone, $1.25)	" 2.00
No. 8—	The Bee Journal a year and a "Wood Binder," for holding a year's numbers (binder alone, 20c)..........	" 1.10
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Please Mention the Bee Journal when writing Advertisers ***

honey. I have a good home trade, and have only 75 pounds of honey left. I sold it for 10 cents a pound, wholesale and retail.

I have my hives bought for 1905. I use the "Muth special", 8-frame. I have 10 Danzenbaker hives, but I do not like them on account of the closed-end frame. I like the "Muth special" because it has Hoffman frames and Colorado covers.

I wish you could see some of my fall honey. It is as white as snow, and is gathered from "frost flowers", the last bloom of the season. It lasts about 12 days, and frost will not kill it.

I winter my bees on the summer stands. FRANK HINDERER.

Schuyler Co., Ill., Oct. 26.

Milk for Bee-Stings—Extracting from Combs Containing Brood.

The honey season in this vicinity has been a poor one. Half a crop is what most bee-keepers report, and this was gathered during white clover bloom. It has been too wet, and nights too cool, for honey-gathering. Some bee-keepers who work for extracted honey will have to feed their bees. I work for comb honey; I have 20 colonies that are very strong in bees and heavy with honey, and I can see no reason why they should not winter well unless the bees are too old to live through a long winter. They have to remain in winter quarters four months or more.

On page 660 appears an account of the serious experience of W. W. Shafer with bee-stings. Mr. Shafer asks for some remedy to counteract the bad effect. I will give an account as it was given by one of my neighbors, a bee-keeper of large and long experience. As I shall give it from memory I may not get all the details as they were told to me.

Mr. Jones has a large apiary, and is afflicted with rheumatism. In the spring of 1903 he was obliged to get a man to help him. This man was stung one day and it affected him the same as it did Mr. Shafer. Mrs. Jones had heard that milk was a sure relief for persons thus affected, so she gave him all the milk he could drink, and in a short time he was relieved, and the effect of the sting all disappeared.

This same man was stung again the past season, and the effect was worse than in the first instance, for it was thought that he was dying. The milk remedy was given as before with the same result.

Milk is a very pleasant, agreeable medicine to take, and is worth a trial by others. But it must be borne in mind that the same medicine may not affect different persons in the same way. I seldom get stung, but when I do I apply aqua ammonia as soon as possible, and in a very few minutes the effect of the sting is all gone; but

The Rietsche Press

Made of artificial stone. Practically indestructible, and giving entirely satisfactory results. Comb foundation made easily and quickly at less than half the cost of buying from the dealers. Price of Press, $1.50—cash with order. Address,

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BEE-SUPPLIES

Root's Goods at Root's Prices

Everything used by Bee-Keepers.
POUDER'S HONEY-JARS. Prompt Service.
Low Freight Rates. ... ... Catalog Free

You are entitled to Special Discounts for Early Orders till April first.

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RETAIL AND WHOLESALE,

Has an established reputation, because made by a process that produces the **Cleanest and Purest, Richest in Color and Odor, Most Transparent and Toughest**—in fact, the best and most beautiful Foundation made. If you have never seen it, don't fail to send for samples. Working wax into Foundation for Cash a specialty. Beeswax always wanted at highest price. A full line of **SUPPLIES**, retail and wholesale. Catalog and prices with samples free on application.

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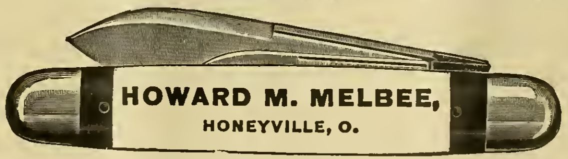
The Novelty Pocket-Knife.

Your Name and Address on one side—Three Bees on the other side.



[THIS CUT IS THE FULL SIZE OF THE KNIFE.]

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield-spring-steel, and the finish of the handle as described above. It will last a last-time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00.) We will club the Novelty Knife and the Bee Journal for one year, both for $2.00.

GEORGE W. YORK & CO. Chicago, Ill

☞ Please allow about two weeks for your knife order to be filled.

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Good for the Balance of This Season Only.

As I desire to unite my nuclei as soon as possible, I will sell **ITALIAN QUEENS** at the following low prices, until my present supply is exhausted:

Untested Queens, 60 cents each; six or more, 50 cents each. Select Untested, 75 cents each; six or more, 60 cents each. Safe arrival and satisfaction guaranteed. Send for circular and read reports from enthusiastic customers.

J. P. MOORE,
39Atf Morgan, Pendleton Co., Ky.

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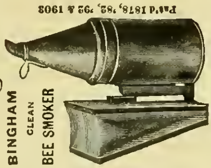
Original Direct-Draft Bee-Smoker.

26 Years. BEST ON EARTH.

I think a few of the many letters I receive will interest you more than anything I could write. Of course you would like to know why Bingham smokers go without puffing and smoke all the time and are always ready, FULL OF SMOKE and burn anything dryish and never go out just when you want smoke the most and quick. I have not room to tell all about them, but they DO ALL the above things to perfection. But what I wish to say is,

SEND FOR CIRCULAR.

T. F. BINGHAM, Farwell, Mich.



DEAR SIR:—We have used and sold all the advertised smokers, but find none that suit us as well, or that find as much favor with our patrons as the Bingham smoker. They have no equal.
THE FRED W. MUTH CO., Cincinnati, Ohio.
May 19, 1904.

Mont. Vista.

This delightful 20-acre place situated at Griffin, Ga., is now for sale. 1000 feet above sea-level, affords a delightful climate. Especially suited for poultry, bees, and small fruit. Griffin is a manufacturing town of 8000, making a home market at high prices. Full particulars from owner.

H. E. WEED,
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Lightning Knife Sharpener!

Every kitchen needs a knife sharpener. Every woman will appreciate the LIGHTNING KNIFE SHARPENER—a new kink for the kitchen. It's cheap, but it's nicely made and finished, and will wear well Puts a keen edge on the knife and saves the stovepipe. *Sample mailed for only three 2-cent stamps* Order at once—they are going like hot-cakes.

Address, **LIGHTNING KNIFE SHARPENER CO.**
(Not incorporated)
534½ OGDEN AVE., CHICAGO ILL.

If you want the Bee-Book
That covers the whole Apicultural Field more completely than any other published,
Send $1.20 to
Prof. A. J. Cook, Claremont, Cal.,
—FOR HIS—
"Bee-Keeper's Guide."
Liberal Discounts to the Trade.

ammonia has no effect on my wife, and she uses soda with the result that I have in using ammonia, and soda has no effect on me.

I agree with E. E. Hasty, page 666, in regard to extracting honey from comb that contains brood. Mr. Hasty did not use any too strong language when he said "the most pronounced nastiness ever to be found in a normal bee-hive is right adjacent to the brood". This practice ought to be frowned upon and made so disgusting that bee-keepers will cease to extract from such combs. S. B. SMITH.

Mille Lacs Co., Minn., Oct. 31.

10 CENTS A YEAR.

The Dixie Home MAGAZINE, largest, brightest and finest ILLUSTRATED MAGAZINE in the world for 10c a year, to introduce it ONLY.

It is bright and up-to-date. Tells all about Southern Home Life. It is full of fine engravings of grand scenery, buildings and famous people. Send at once. 10c a year, postpaid, anywhere in the U.S., Canada and Mexico. Six years, 50c. Or, clubs of 6 names, 50c; 12 for $1. Send us a club. Money back if not delighted. Stamps taken. Cut this out. Send to-day. **THE DIXIE HOME,**
24A48t No. 75. Birmingham, Alabama.

Please mention Bee Journal when writing

"Combed" and "Extracted"

The Influence of Locality.

In my early bee-keeping years I was often sorely puzzled at the diametrically opposite views often expressed by the different correspondents for the journals. In extenuation of that state of mind I may say that at that time I did not dream of the wonderful difference of locality in its relation to the management of bees. I saw, measured, weighed, compared, and considered all things apicultural by the standard of my own home—Genesee Co., Mich. It was not until I had seen the fields of New York white with buckwheat, admired the luxuriance of sweet clover growth in the suburbs of Chicago, followed for miles the great irrigating ditches of Colorado, where they give life to the royal purple of the alfalfa bloom, and climbed mountains in California, pulling myself up by grasping the sage-brush, that I fully realized the great amount of apicultural meaning stored up in that one little word—*locality*.

The basic principles of apiculture are the same the world over, but the management must be varied according to the locality. In the South and extreme West the wintering of bees is easily accomplished, it being necessary only to see that they have sufficient food. As we go North some protection must be given—either by packing or by the use of chaff-hives. As we go still farther North successful wintering is secured, as a rule, only by the use of first-class winter stores, and putting the bees into a cellar.

In Cuba and Florida the honey harvest comes in the cooler part of the year, or what corresponds to our northern winter, and those varieties of bees that will breed late in the summer, even though little or no honey is coming in, are more desirable, as more populous colonies are thus secured at the opening of winter. In the northern States, east of the Mississippi, the main honey flow comes, as a rule, early in the summer. It may be very abundant, but is seldom of long duration; for this reason those varieties of bees are preferable that rear brood very abundantly early in the season, and then slacken breeding as soon as the main harvest begins. In some parts of the West the honey harvest is much longer than in the East. There are no

A Solid Gold Fountain Pen Free!

Finally, we have found a good Fountain Pen that is reasonable in price. The manufacturers of this pen say that if you pay more than $1.25 for other fountain pens, it's for the name.

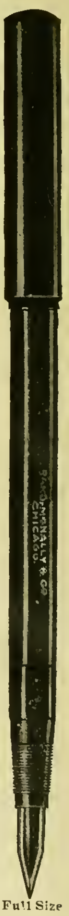
This pen is absolutely guaranteed to work perfectly, and give satisfaction. The Gold Nibs are 14 kt., pointed with selected Iridium. The Holders are pure Para Rubber, handsomely finished. The simple Feeder gives a uniform flow of ink. Each pen is packed in a neat box, with directions and Filler.

How to Get this Fountain Pen Free!

To a present paid-in-advance subscriber, we will mail this Fountain Pen free as a premium for sending us 3 NEW SUBSCRIBERS to the weekly American Bee Journal for one year (with $3.00). Surely, this is an easy way to get a good Fountain Pen. Or, if unable to get the two new subscribers, and you want one of these Pens, forward to us $1.25 and we will send it to you by return mail. Or for $2.00 we will send to any one the American Bee Journal for one year and a Fountain Pen.

This Fountain Pen would be a splendid gift to a friend or relative. Why not order both Pen and Journal for some bee-keeper as a present?

Address all orders to
George W. York & Co.,
CHICAGO, ILL.



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such rapid flows as we have here sometimes from basswood, but there is a steady flow that may last for months, the conditions being ideal for the production of comb honey, as there is abundant time in which to build combs for the storage of the honey, fill them and seal them over.

In the white clover and basswood regions swarming and the main honey harvest come at the same time; in some parts of the Southwest swarming comes on with the flow from the early minor honey-plants, and is almost entirely abandoned with the advent of the heavy honey-flow that comes on later.

The question of large versus small hives, over which there have been so many spirited discussions, is largely one of locality. In the cooler regions, where the harvest is early and short, small hives find favor, especially in comb-honey production, while the large hive is a favorite in the warmer regions that are blessed with a long honey-flow.

Which the bee-keeper shall produce, comb or extracted honey, is also largely a question of locality. Where the main honey-flow is short, as it often is from basswood, sometimes lasting only a few days, there is not time for the bees to build combs in the sections, fill them and cap them over before the harvest is over and past. With full sets of drawn combs in the extracting-supers a good crop of extracted honey may be secured within a week. Such conditions as this exist in many parts of Wisconsin. Where honey must be shipped long distances to market, as is the case in Cuba and California, one very important reason for producing extracted honey is that there is so much less danger of damage in shipment. Dark honey is, as a rule, much more salable in the extracted form. When the flow is light, but constant and of long duration as in Colorado, and the honey is white, comb-honey production has its advantages, as honey is worth more when stored in sections than when taken in the extracted form.

California furnishes the most immense crops of honey that are anywhere produced, but they are entirely dependent upon the rainfall that comes in the winter. If the rains fail to come the bee-keeper knows to a certainty that not only will there be no surplus, but unless the proper management is given his colonies will perish from starvation.

In the buckwheat regions of New York not much dependence is placed upon the early honey-flows for securing a surplus. They enable the bees to breed up, and, as a rule, finish their swarming before the buckwheat opens, when the main crop of the season is gathered. A colony so weak in the spring that it would be nearly useless in a flow from clover or basswood, has abundant time in which to build up for the buckwheat honey harvest.

Then, again, there are localities near swamps where the main flow comes very late from fall flowers, asters, and the like. The yield is often very abundant, but the quality is undesirable when used for winter stores. If the cold confines the bees for several months upon such stores, they are almost certain to perish. The only remedy is to extract the honey and

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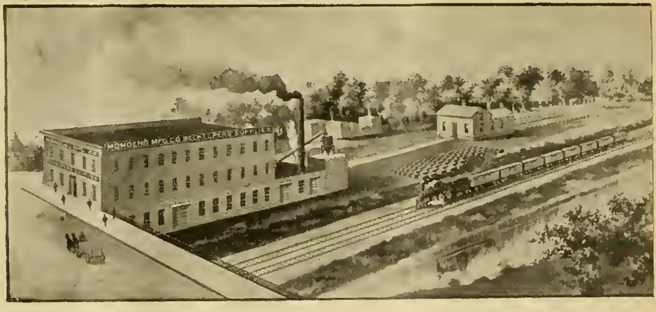

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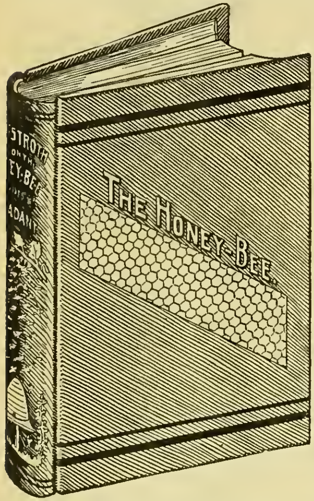
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feed sugar syrup; unless it might be that of brimstoning the bees in the fall, and buying more in the spring from some other locality, a course which has been followed successfully, as the long season for preparation allows of the building up of one colony into several.

It would be an easy matter to use pages in giving illustrations of the differences in localities, but it is unnecessary; the thing for the bee-keeper to remember is that if he changes his locality he must leave behind him many of his old notions and methods, and seek the advice of his new neighbors who have been successful. The veteran bee-keeper from the verdant hills of Vermont would make a flat failure were he to bring his apiary to Colorado, and manage it the same as he has been accustomed to doing. A bee-keeper can not know his locality too thoroughly. Some men succeed in localities where the majority fail, and one reason is because their more thorough knowledge of the locality enables them to adopt methods more perfectly adapted to the peculiarities of that location. Above all things *know your locality.*—W. Z. HUTCHINSON, in the Bee-Keepers' Review.

Foul Brood and Black Brood.

The 10th annual report of the Department of Agriculture contains a report on bee-diseases, by Veranus A. Moore, M. D., and G. Franklin White, B. S., of the New York State Veterinary College, Cornell University, Ithaca, N. Y. I have already referred to this report (page 121, Feb. 1), expressing surprise that all the samples of black brood that have come under the inspection of these bacteriologists are diagnosed as *foul brood.* Indeed, the half-tone reproductions from the microscopic slides show the identical rodlike bacillus of the genuine *Bacillus alvei.* But the specimens diagnosed as black brood by the inspectors, these scientists do not find to be the same as the specimens which are pronounced by the same inspectors "foul brood". Unlike foul brood with which we are familiar, the diseased matter of the black brood of New York is *not viscid,* according to the New York bacteriologists. All the genuine cases of foul brood I have seen were *always viscid or ropy.* The disease that wrought such destruction in New York, which we have commonly called "black brood", is not ropy, but, on the other hand, has a sort of fermented smell. The foul brood of Europe, and with which we are familiar, is gluey, and smells like a cabinet-maker's glue-pot. If the bacteriologists of New York are correct, then *Bacillus alvei* manifests itself in two forms; and this leads to the inquiry whether or not there is some *other* microbe, which, in conjunction with *Bacillus alvei,* changes the general character of the disease so that it gives rise to "black brood".

Dr. W. R. Howard, of Fort Worth, Tex., says he found an entirely new microbe, and not *Bacillus alvei.* The one he discovered he called *Bacillus milii,* from its general resemblance to millet seed; but the New York men do not find anything of this kind, notwithstanding they have pursued their investigation the second season, and this last time with the special view of

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The Passenger Department of the Illinois Central Railroad Company have recently issued a publication known as Circular No. 12, in which is described the

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For Thanksgiving Day

the Nickel Plate Road will sell tickets within distances of 150 miles, Nov. 23 and 24, at rate of a fare and a third for the round-trip. Return limit Nov. 28. Three through trains daily to Ft. Wayne, Cleveland, Erie, Buffalo, New York, Boston, and New England points, with vestibuled sleeping-cars. No excess fare charged on any train on the Nickel Plate Road. Meals served in Nickel Plate dining-cars, on American Club Meal Plan, ranging in price from 35 cents to $1.00; also a la carte. Chicago city ticket offices, 111 Adams St. and Auditorium Annex. Depot, La Salle and Van Buren Sts., on the Elevated Loop. Telephone Central 2057. 29—45A2t

determining whether their first findings were correct.

The Europeans have spoken of the fact that there are two forms of foul brood—the mild and the virulent. As it has been generally regarded that the black brood, so called, was much worse, it may be that we have here an outcropping of the more malignant kind. But the foul brood we had here in Medina 18 years ago was pronounced by scientist Mr. Thos. Wm. Cowan, who examined the disease with his microscope, *to be the same as that in Europe*, and the symptoms of it in every way tallied with the descriptions of it in all the European works as far as I know. The fact that this black brood deports itself so differently in external symptoms to those shown by foul brood is somewhat of a puzzle. I think that, for a matter of convenience, we shall have to call one black brood, as we have been doing, and the other foul brood, and in the meantime may discover whether or not there is another microbe that works with *Bacillus alvei* to produce the other disease.—Gleanings in Bee-Culture.

CONVENTION NOTICES.

Illinois.—The Chicago-Northwestern Bee-Keepers' Association will hold its next annual meeting on Wednesday and Thursday, Nov. 30 and Dec. 1, 1904, in the Revere House, southeast corner of North Clark and Michigan Sts.. Chicago. The prospects are that this convention will be the largest and best ever held by the Chicago-Northwestern. Prominent bee-keepers from a distance have said they were coming. It will be a great time. Everybody at all interested in bees or bee-keeping is urgently invited to be present. There will be live discussions of live subjects relating to bee-keeping. Come. It's Nov. 30 and Dec. 1. And Chicago is the place!

Park Ridge, Ill. HERMAN F. MOORE, Sec.

Pennsylvania.—The Pennsylvania State Bee-Keepers' Association will hold its fall convention in Harrisburg, Tuesday and Wednesday, Dec. 6 and 7, 1904. An excellent program has been arranged. Many subjects of vital interest will be ably presented. General Manager N.E. France, of the National Bee-Keepers' Association, will be present, as well as other prominent bee-keepers. Every bee-keeper in Pennsylvania should interest himself in this meeting. D. L. WOODS, Sec.

Muncy, Pa.

Minnesota.—The Minnesota Bee-Keepers' Association will hold its next session in the First Unitarian Church, corner 8th St. and Mary Place. Minneapolis, Minn., on Wednesday and Thursday, Dec. 7 and 8, 1904. This promises to be the best meeting this Association has ever held. MRS. W. S. WINGATE, Sec.

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Honey and Beeswax

OUR TOIL DOTH SWEETEN OTHERS

CHICAGO, Nov. 7.—There is not demand sufficient to take the receipts; hence are accumulating, off grades of the surrounding territory. Fancy white clover brings 14c; other No. 1 to fancy white, 12½@13c; off grades 1 and 2c less; amber, 10@12c. Extracted, white, 6½@7c; amber 6@7c; all of the foregoing is governed by quality, flavor and kind of package. Beeswax, 28@30c per pound. R. A. BURNETT & CO.

KANSAS CITY, Sept. 22.—Market on comb honey is quite active at $2.75 per case for fancy white stock. Extracted rather slow at 6½@7c. We look for the demand on extracted to pick up considerably with cooler weather. Beeswax in good demand at 30c per pound.

C. C. CLEMONS & CO.

BOSTON, Oct. 24.—We are pleased to note an increased demand for honey, which with comparatively speaking, light receipts, makes prices firm. We quote fancy white, 16@17c; No. 1, 16c; with but little No. 2 on hand or to be had. Extracted, light amber, 7@8c.

BLAKE, SCOTT & LEE.

CINCINNATI, Oct. 28.—There is a marked improvement in the demand for comb honey since our last quotations. No material change in the extracted-honey market. We continue to quote white clover extracted honey in barrels and cans at 7@8½ cents; amber in barrels, 5¼@6c. Fancy white clover comb honey, 14@15c. Beeswax, 28c. THE FRED W. MUTH CO.

ALBANY, N.Y., Nov. 9.—The crop of honey is turning out to be larger than estimated, and prices are softening, favoring the buyer. We quote fancy white, 15c; A No. 1, 14c: No. 1, 13c: mixed, 11@12c; buckwheat, best, 13c; average run, 11@12c. Extracted, buckwheat, 6c; white clover, 6½c; mixed, 6c. Beeswax, 29@30c.

H. R. WRIGHT.

NEW YORK, Nov. 7.—Receipts are now plentiful of nearly all grades. The demand is not quite as brisk as last year, and only fair. We quote fancy white at 14@15c; No. 1 white, 13c; lower grades at from 10@12c; buckwheat, 9@11c, according to quality. There is fairly good demand for extracted honey at unchanged prices. Beeswax dull at from 28@29c.

HILDRETH & SEGELKEN.

PHILADELPHIA, Nov. 10.—Shipments have been quite heavy in the last two weeks. Prices are a little weaker in consequence, although fancy honey maintains a good price. We find the shortage is always in the fancy goods, and the off goods are what overstock the market. We quote: Fancy, 16@17c; No. 1, 14c; amber and No. 2, 12@13c. Extracted, white, 8c; amber, 6@7c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

SAN FRANCISCO, Nov. 2.—White comb. 1-lb. sections, 12½@13c; amber, 9@11c. Extracted, white, 6@6½ cents; light amber, 4½@5½c; amber, 3¾@4¼c; dark amber, 3@3½c. Beeswax, good to choice, light, 29@30c; dark, 27@28c.

Market is tolerably firm for high grade honey, with little of this sort in stock. Of the medium and lower grades there is more than enough for the immediate demand. Six carloads of Hawaiian Island honey recently arrived here, and is reported to have been shipped East; more is expected from same quarter.

CINCINNATI, O., Nov. 7.—Comb honey is now coming in more freely, and prices if anything have moderated a little. The sales made and prices obtained were for No. 1 fancy water-white comb, 13@15c; No. 2, 12@14c. Extracted is sold as follows: White clover, in barrels, 6½ cents; in cans, 7½@8c; amber, in barrels, 5¼@5½c; in cans, 6@6½c. Beeswax, 27c.

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(See page 788.)

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GEORGE W. YORK, Editor. CHICAGO, ILL., NOV. 24, 1904. Vol. XLIV—No. 47.

Editorial Notes and Comments

The Chicago-Northwestern Convention.

Don't forget to attend this convention at the Revere House, southeast corner of North Clark and Michigan Streets, Chicago, next Wednesday and Thursday, Nov. 30 and Dec. 1. It promises to be one of the most largely attended conventions held in the United States in a long time. Many prominent bee-keepers have indicated their expectation of being present. As this Association covers such a large territory surrounding Chicago, it should have even a larger attendance than some of the National meetings. Low railroad rates will also be in force at the time of the meeting, on account of the International Live Stock Exposition, which is held here the same week.

One of the greatest attractions at the coming meeting of the Chicago-Northwestern will be a stereopticon lecture by Mr. E. R. Root. In connection with this, swarming and methods of hiving will be shown by the kinetoscope. As most of our readers know, this will be a moving picture show. The panorama presents in turn the hive of bees, the bees pouring out of the hive in perfect swarms, circling in the air, clustering on a limb, which is then sawed off and carried to a new hive, dumped on the ground, and the bees scooped up by the handful. It takes 10 or 15 minutes to run this picture through, for there are over 450 feet of it all told, making in all about 4000 pictures. Mr. Root expects to exhibit this also at the Minnesota convention in Minneapolis, Dec. 7 and 8, and at the next meeting of the Cincinnati association. Surely, it ought to help to draw a large attendance of bee-keepers to all these meetings.

There is a good prospect of having in attendance at the Chicago-Northwestern convention the following, some of whom are *sure* to come: Dr. C. C. Miller, N. E. France, C. P. Dadant, Gus Dittmer, J. Q. Smith, Chas. Becker, and many others whose names are well known to the bee-keepers of this part of the country.

Let all the bee-keepers come who can possibly do so. And don't forget to bring along, or send to this office, any apiarian questions that you'd like to have presented.

Nominations for Officers of the National.

A recent Stray Straw by Dr. C. C. Miller, in Gleanings in Bee-Culture, runs thus:

"General Manager France, in giving that lot of names as candidates, has followed his own notion, not the rule of the directors. The rule is that "the two men receiving the greatest number of votes for each respective office are to be candidates for such office". The spirit and intent of that rule is that those two shall be candidates, *and no others*. If the intent had been that all were to be considered on equal footing, what sense was there in saying anything about the two highest? When that rule was submitted, I sent an earnest protest to the chairman, but there was no chance for discussion. A little wire-pulling might succeed in giving the highest preliminary vote to two men not the choice of the whole, and the best man for the place entirely shut out of the race. If there had been any chance for discussion, I don't believe the directors would have passed any such rule."

The saying, "Any fool can find fault, but the remedy, that's the thing", may possibly apply here. It seemed high time that something should be done to prevent the continuance in the directors' office year after year of the same men, without any chance for change. Not that there is any wrong in continuing a man in office, if he be the best man for the place, but as the thing has been heretofore for many years, there was little chance for any change, whatever the qualifications. The rule adopted by the Board of Directors was at least an effort in the direction of something done by way of nomination before taking the vote. That there are objections to the rule can not be denied. But while finding fault with the present rule, why doesn't Dr. Miller say what is better? Very likely he may say, "I don't know".

At any rate, it can do no harm to discuss the matter, so as to be ready for something else another year, and the columns of this paper are open to such discussion. No doubt the directors will be glad of any suggestions that may be made.

Uniform Size of Sections for Honey.

There are advantages in having as much uniformity as possible in the different implements and supplies used by bee-keepers. It would be less matter if each bee-keeper was his own manufacturer, but the manufacturers from whom supplies are bought can of course do better to make in large quantities, and the less supplies cost manufacturers the better ought to be the market for bee-keepers.

Differences in localities may account for necessary difference in such things as hives, but it hardly seems that great difference in sections is needed. Speaking of this, the editor of the American Bee-Keeper says:

"The two-pound, and the half-pound sizes of section, which used to strive for a place in the honey market, have been crowded out by the medium-size—one-pound. The late 'tall section' fad is the only menace to loom up before the very desirable condition of uniformity in American comb-honey packages."

The chief, if not the only claim for superiority on the part of the tall section, is that it *looks* larger than the square section. In general it is right to concede something for looks. Indeed, a considerable part of the value of a section of honey lies in its looks. Not many would be likely to pay so much more for a pound of section honey than for a pound of extracted honey, if it were not that a section of honey upon the table is a "thing of beauty". Is there, however, more beauty in a tall section than a square one? Probably few would say that an oblong section looks more beautiful on a plate than a square one. The customer prefers the tall section, not because it looks *better*, but because it looks *larger*. In plain words, he is deceived into the belief that it is larger.

If there are other advantages in the tall section, it should have its fair chance in securing favor; but is it well to urge a claim that is based on deception?

Comb Honey for Candy.

Honey has been known to be used to some extent in the manufacture of candy, and some years ago the lamented "Rambler"—J. H. Martin—went so far as to put up very small packages of granulated honey as a confection. All this, however, was extracted honey, and it comes as a surprise to be told that comb honey is now used in the manufacture of candy. Although details are exasperatingly meager, here is what J. A. Green says about it in Gleanings in Bee-Culture:

> "A bee-keeping friend tells me that he sells a great deal of dark honey to a confectioner who uses it in the manufacture of high-grade candies. This is comb honey, mind you, not extracted honey. When I first heard this I thought the buyer had the idea that he had to buy it in the comb to be sure of a pure article, but it seems he has an altogether different reason. The whole thing, comb and all, is put into the candy. He claims it makes it 'stand up' better. That is, I presume, it endures better the changes of temperature and moisture. I had heard already of using paraffin for this purpose, but he claims that the honey-comb is superior. It is possible that here is a market that might profitably be cultivated and enlarged."

Miscellaneous News Items

The Chicago-Northwestern Convention will be held next week—Wednesday and Thursday—Nov. 30 and Dec. 1. The first session will be at 10 a.m., Nov. 30, in the Revere House, southeast corner of North Clark and Michigan Streets. A big attendance and a big time are expected. Better come.

* * *

Gus Dittmer's and Comb-Foundation Making.—We left St. Paul at 8:30 Wednesday morning, Oct. 19, on the Chicago & Northwestern railroad, and arrived at Augusta, Wis., at about 12:20 p.m. It was just beginning to rain—a sort of drizzle-drozzle. We inquired of the station agent where Mr. Dittmer's factory was. "Gus Dittmer?" he asked. "Why, right across there", he pointed; "where you see those red buildings".

We thanked him, and started for the "red buildings". By the way, Mr. Dittmer has done his share toward "painting the town red", for he has four buildings of that color devoted to the bee-supply and comb-foundation business.

It was a little late, so we stopped at the hotel for dinner, after which we went on to Mr. Dittmer's. Arriving, we opened his office door, and there he was as busy as a honey-bee in a basswood blossom. Of course he was surprised to see us, as he was not expecting us at all. We had met him at the Wisconsin convention last February, so we were not entire strangers to each other. He is the excellent secretary of the State Bee-Keepers' Association.

After a little visiting he took us over to his pleasant home to meet his good wife, daughters, and son. The second son, Clarence, had left about a month before to attend school in a Kansas university, having graduated from the Augusta schools last June. "Fred" (24 years) and "Bessie" (22) are the oldest son and daughter, respectively, and are the main helpers in the business.

Fred is really his father's right-hand man, having entire charge of the manufacturing and shipping, while Mr. Dittmer attends to all the office-work, melting wax, and has a general supervision of the business.

Bessie runs a comb-foundation machine as easily as many another young lady would run a sewing machine. The fact is, that the whole Dittmer family are "in the business". And they are a happy family. They seem to enjoy each other so much. We shall not soon forget our stay there. And we stayed longer than we intended, but it was not wholly our fault. We expected to leave on the 10:20 p.m. train, and Mr. Dittmer started with us for the station. We arrived just about a half minute too late, for the train pulled out before our eyes—"so near and yet so far". Mr. Dittmer declared that it was a minute ahead of time!

Before leaving for the train both Mr. and Mrs. Dittmer had urged us to remain all night, but we thought we would better go on to the next place. So when we came back to the house again with Mr. Dittmer the rest of the family rather had the laugh on us. But it was all right. The "Dittmer House" is a good place to stop. There was not another train going east until the next noon. But the time was all too short. Mrs. Dittmer, and, in fact the whole family, are royal entertainers. Even little Margaret (9 years old) recited several beautiful selections, and she and her little girl friend sang a duet for us before starting for school in the morning. Mr. and Mrs. Dittmer may well take pride in their children. They are all bright, and full of push and energy. And the children may also rejoice that they have such a father and mother.

We had never before seen comb foundation manufactured, so here was our chance. Everything was open to us except the sheeting process, which is one of the Dittmer secrets. We should judge, however, from what Mr. D. said, that this process of sheeting beeswax is superior to that of the Weed process.

It was very interesting to see the machine turn out the clear, bright surplus foundation and pile it up with sheets of tissue paper between the sheets of foundation, all done automatically. Mr. D. probably has the only automatic papering arrangement there is in existence. It is a very simple arrangement, indeed. And the proper length of both paper and foundation is cut off together with one movement of the sharp knife.

Mr. Dittmer himself studied out all of his comb-foundation methods, except, of course, the roller mills through which the long, plain sheets of beeswax pass and receive the impressions of the comb-cells. It took him several years to perfect his beeswax melting, purifying, and sheeting processes. It all involves much labor and care, but when his beeswax is ready for the foundation-mill it is almost as transparent and free from impurities as glass, comparatively speaking.

Mr. Dittmer's output of comb foundation this year (1904) will be about 25,000 pounds. His daily capacity is about 1500 pounds. We were surprised to learn this. The fact is, his product has been received with such general favor among bee-keepers that the demand has steadily increased until he is now, we believe, third in the list of comb-foundation makers in this country. Next year, if the season proves good, we shouldn't be surprised to see him occupy second place. He is so energetic and enthusiastic, and there is such a "get there" way about him and his whole family, that he is bound to succeed. Well, he deserves all the success that may come to him. All men like to see an honest, industrious man win. Gus Dittmer is a winner. You can put that down somewhere. He is grateful for the patronage that has come to him, and is ready to welcome more.

GUS. DITTMER.

It is truly wonderful to see what Mr. Dittmer has accomplished since the disastrous factory fire which almost wiped him out last February. An ordinary mortal would have given up the battle. But not so with Mr. Dittmer. He and his faithful family gathered themselves together as quickly as possible. Loyal friends and neighbors volunteered all kinds of assistance. Some offered him all the cash he might need. Mrs. Dittmer said it was almost worth the fire loss to see how true were proven some of their friendships. It strengthened their faith in humanity. But, after all, the fire was a hard blow in another way, as it put off several years the long-hoped-for new dwelling-house. Still, that will be on hand shortly, and will be appreciated all the more when it does come.

Augusta is a town of about 1500 inhabitants, in a rich agricultural district. Mr. Dittmer has resided there practically all his life, although he was born in Prussia, Germany. He is a prominent citizen in his town and county, and active in all good causes. His habits have been such as would invariably produce the best in character as well as in substantial results, as the world measures success. These characteristics are shared in by Mrs. Dittmer, and thus they are bequeathing to their children a legacy richer and more enduring than that of financial wealth or earthly position. Character and education—the best of life's equipments—can not be purchased, or even transferred by order. They are the result of a steady growth and development throughout the years. Hence, their higher and more lasting value.

The Illinois State Bee-Keepers' Association held its convention last week Tuesday and Wednesday, in Springfield. There was the largest attendance in years. Mr. N. E. France, the General Manager of the National Bee-Keepers' Association, was present, and gave an interesting talk on foul brood and the inspector's work in general. A number of very important actions were taken, looking toward the promotion of the bee-keepers' interests in Illinois. The election of officers for the ensuing year resulted as follows: President, J. Q. Smith; 1st vice-president, A. Coppin; 2d vice-president, S. N. Black; 3d vice-president, J. W. Primm; 4th vice-president, J. W. Bowen; 5th vice-president, James Poindexter; secretary, James A. Stone, R. 4, Springfield, Ill.; and treasurer, Charles Becker. The three principal officers were all re-elections, thus testifying to their efficiency and interest in the work.

Probably the most important action taken was that looking toward the affiliation of all local associations in Illinois with the State Association, on the payment of a membership fee of 25 cents each, whenever a local association joins the State in a body.

We expect later to publish a full report of the proceedings of this convention.

Geo. E. Hilton, of Newaygo Co., Mich., writing us Nov. 12, reported that he was just recovering from the most severe illness of his life, not having seen his office for over six weeks, and then able to sit up only a part of the time. He hoped soon to be all right again, but it seemed a slow process. Mr. Hilton is one of Michigan's best-known bee-keepers. Over 20 years ago he attended his first bee-keepers' convention in Chicago. It is hoped that he, with many other old-time bee-keepers, will be able to be here again next week Wednesday and Thursday, when the Chicago-Northwestern holds its annual meeting.

Honey as a Health-Food.—This is a 16-page honey-pamphlet intended to help increase the demand for honey. The first part of it contains a short article on "Honey as Food", written by Dr. C. C. Miller. It tells where to keep honey, how to liquefy it, etc. The last part is devoted to "Honey-Cooking Recipes" and "Remedies Using Honey". It should be widely circulated by those selling honey. The more the people are educated on the value and uses of honey the more honey they will buy.

PRICES, prepaid—Sample copy for a two-cent stamp; 50 copies for 70 cts.; 100 for $1.25: 250 for $2.25; 500 for $4.00; or 1000 for $7.50. Your business card printed *free* at the bottom of the front page on all orders for 100 or more copies. Send all orders to the office of the American Bee Journal.

Some Facts About Honey and Bees.—This is the subject of an article written by Mr. J. E. Johnson, and published on pages 581 82 of the American Bee Journal for Aug. 25, 1904. We have republished it in 4-page leaflet form for general distribution, and furnish it, postpaid, at 35 cents per 100 copies. Send all orders to the office of the American Bee Journal.

Opinions of Some Experts

Plain Sections vs. the Slotted Kind.

18.—*(a) Have you tried plain sections?*

(b) If so, what is your estimate of them as compared with sections having insets?

S. T. PETTIT (Ont.)—a. No.

C. DAVENPORT (Minn.)—No.

E. S. LOVESY (Utah)—a. No.

R. L. TAYLOR (Mich.)—a. No.

O. O. POPPLETON (Fla.)—a. No.

N. E. FRANCE (Wis.)—a. A few.

J. M. HAMBAUGH (Calif.)—a. No.

REV. M. MAHIN (Ind.)—a. I have not.

MRS. J. M. NULL (Mo.)—a. I have not.

PROF. A. J. COOK (Calif.)—a. *No.* In theory they are good.

P. H. ELWOOD (N. Y.)—a. No, but I am favorably inclined to them.

DR. J. P. H. BROWN (Ga.)—I have tried both kinds, but I prefer the slotted sections.

DR. C. C. MILLER (Ill.)—a. Yes. b. I can't get more money out of one than the other.

C. H. DIBBERN (Ill.)—a. Yes. b. They are better, save scraping and expense in shipping-cases.

ADRIAN GETAZ (Tenn.)—a. Yes, in connection with the fences. b. Better than any other arrangement.

E. D. TOWNSEND (Mich.)—a. Yes, we use the 4x5 plain section. b. They appear to sell a little more readily.

G. M. DOOLITTLE (N. Y.)—I do not see enough advantage in the plain sections to warrant changing to them.

E. WHITCOMB (Nebr.)—a. I work for extracted honey only. b. I confess that the plain section seems to catch the eye more favorably.

JAS. A. STONE (Ill.)—a. Yes. b. I like them so well that I am setting aside all my old tin separators and getting no other than the fence separators and the plain sections.

WM. ROHRIG (Ariz.)—a. In a small way. b. If I were producing comb honey for the market I think I would use plain sections largely. They are more easily cleaned, and look more attractive when filled, than sections having insets.

EUGENE SECOR (Iowa)—a. Just a little. b. If one has the fences and everything necessary to use plain sections they are all right so far as getting honey is concerned, but I don't like them as well in a shipping-case—so hard to get hold of a section.

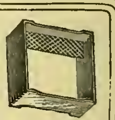
L. STACHELHAUSEN (Tex.)—a. I have. b. I like them, but the customers at first did not, because they seem to be smaller. Some talking was necessary before they accepted them. More sections can be packed in the same shipping-case; that's the main advantage.

G. W. DEMAREE (Ky.)—a. I tried them 20 years ago, plain 4-piece sections made at home. b. In my experience they require too much propolized "rigging up" to adapt them to the essential "tiering-up system". In my estimation there is no comparison between the open-top-and-bottom sections and the plain sections, when it comes to simple, practical work.

R. C. AIKIN (Colo.)—a. Yes. b. I want mine with the insets ⅛ only, and *entire* width of section. The old 4-piece nailed section was *better* than the modern 1-piece as scallops and insets are made. Top and bottom bars should be the same width their *entire length.* Plain sections are so, that is *main* reason they are better finished. I have been kicking to have all sections embody that feature, but factory people would not heed me. It is six one way and a half-dozen the other, so far as finish goes, whether the bee-way is in the section or in the separator; but I have it go clear to the side-bar—that *counts.*

JAMES A. GREEN (Colo.)—a. Yes. I have used them in a limited way (up to 25 cases a season) for several years. b. I prefer the sections with insets. I think it costs me more to produce honey in plain sections than in the regular style, principally because more combs are fastened to the separators. Plain sections are easier scraped, and more of them can be put in a case of the same size, if this is desired. These are their only advantages worth mentioning in my estimation, while they have some serious disadvantages, the principal one of which is their much greater liability to damage, especially in the hands of the retailer. I believe the use of plain sections has a tendency to lessen the demand for honey, and consequently is a step backward.

Contributed Special Articles



Sainfoin or Esparcet as a Honey-Plant—Other Plants.

BY C. P. DADANT.

On page 740 is a quotation from the Canadian Bee Journal concerning sainfoin as a honey-producer, and the statement that this plant does not produce honey in marketable quantities. This is true of America, but would be erroneous if applied to some other countries.

Sainfoin, otherwise called esparcet—the scientific name of which is Onobrychis sativa—is widely cultivated in Europe, especially in France. Its name, "sainfoin", is French, and literally means "healthy hay"—sain-foin—and I see by the Century Dictionary that in some parts of the United States it has been introduced under the name of "French grass". It is a perennial, gives a splendid hay crop, and in some sections of the European continent it is a first-class honey-producer.

The small province of France, formerly called "Gatinais", is the leading producer of sainfoin honey. According to the best authorities the honey of Gatinais has the reputation of being of the whitest color and sweetest taste, and is said to be in no way surpassed by white clover honey.

Gaston Bonnier, the eminent professor who was president of the International congress of bee-keepers at Paris in 1900, says in his book, the "Cours Complet d'Apiculture", that sainfoin honey is one of the best appreciated grades. He ranks it next only to the honey of the Alpine hills of eastern France and Switzerland.

From immemorial times the honey crops of Gatinais have been considered as leading in the amount of production, and this was all credited to the sainfoin, which is grown there in immense quantities, somewhat as alfalfa is grown in the irrigated plains of the West. It was in Gatinais that the custom of inverting hives began, in order to secure the largest possible quantity of honey from the bees, regardless of future consequences. For that reason the bee-keepers of Gatinais were compelled to replenish their apiaries every season with bees brought from away, as their only aim was to secure the largest possible quantity of sainfoin honey during the short period of its bloom, and many of their bees perished during the following winter.

Although sainfoin has already been tried in the United States with unfavorable results, I believe it is worth while to try it again, especially in the countries where the alfalfa succeeds well. It might prove a useful honey-plant.

We must, however, not close our eyes to the fact that honey-plants do not yield honey in the same proportion in all localities. White clover, which is the source of so large a crop of white honey in this country, is absolutely useless as a honey-producer in some other countries. Edouard Bertrand, the editor of the Revue Internationale, told me positively that there never had been any white clover honey harvested in Switzerland by any of his friends, although it is quite common in the Swiss meadows.

The Caucasian Prickley Comfrey, introduced years ago in America by Arthur Todd, as a very profuse producer of honey, has been tried and cast away in disgust. No bees are even seen upon its blossoms in this section of the country. The Echinops spherocephalus, "Chapman honey-plant", has proven a fake, after having been in such demand that its seed was selling at $5 per pound.

While I was in Swizerland I was shown a plant which had been nicknamed the "Bee's Bar-Room"—"cabaret des abeilles"—because bees were constantly upon its bloom without securing any results.

The goldenrod, so highly prized for its honey in New England is of no value on the shores of the Mississippi as a honey-plant, in Illinois at least, for neither I nor any of my friends interested in bees have ever noticed the bees securing any surplus from it.

We must, therefore, be very cautious in recommending a plant as a honey-producer, unless it has been thoroughly tested. But in the case of the sainfoin, if it can be grown at all, there is no risk to run of its causing any loss of time or money, for its yields as a producer of "healthy hay" would be sufficient to recommend it to the farmers of the land.

Such plants, however, as the Prickley Comfrey and the Echinops would better be left out entirely, for they are noxious weeds not even fit for cattle to consume. A plant which is useful to the farmer is acceptable at any time, but a weed which cattle will refuse ought not to be grown for honey-production. Hancock Co., Ill.

Bees in Jamaica—Other Subjects.

BY ROBERT WEST.

I HAVE been very busy preparing for the perishing season (hard times, as the natives call it), from September to December; yet stole time enough to look over the "Old Reliable", to see how the rest of the bee-world is moving.

We may not profess to be vain, and may even repudiate the idea, yet all seem to like to be noticed, and probably no one but a luna wishes to talk while nobody gives attention. Your "comi-critic" has cast a glance across to Jamaica; and while we have much to thank him for, not only in the little whipping up, but in calling our attention to many good things from others, which, in our haste, we have overlooked; yet he is getting too *Hasty*, or he would not call those few rays from this island "brilliant". I wish he would come to live here awhile, where we have not only the little "fire-flies" from the North, but huge "lightning bugs" one to two inches long, with eight electric lamps around each eye, which, when the current is turned on, light up their course for several yards ahead, and they dart through the air like meteors.

When I came here even the stars seemed four times as numerous, and four times the magnitude, so that starlight was as moonlight; and when the moon cast in her reflections we could sit on the lawn and read without a lamp, and the *bees* would come as if to see if we were eating comb honey; and ere daybreak the blooming thorn-bush sang,

"The hum of the bees
In the logwood trees".

But when that great luminary "Sol" arose from his slumbers, and, with face unveiled, peeped over the mountains down the western slope at us, we looked up and said "that is beautiful", and stood watching the everchanging scene of light and shade as he searched the green herbage on each hillock and along each ridge and valley till, with feeling of rapture, we exclaimed "this is grand!" and both we and our little workers toiled away. We enjoyed his light till about 10 o'clock, when the magnificence of his glory became so great we could not look up at his brilliant face, and the beams came through this clear atmosphere so forcibly that both the bees and we sought shelter, some of them under the hives, while others wore their wings out fanning to keep their combs from melting, and their mother, with her young babes, from suffocating; and in a common box, without glass top, we saw our fragments of comb turning into cakes of wax. Even our "red" wax was bleached white.

COLOR OF WAX.

Pure wax, as made by the bees, I always thought was *white* till I came here, and saw that while some colonies were building white combs, others beside them built yellow. The cause I know not. Perhaps some of the readers can inform us. In the North, where cattle were confined in stalls and fed to grossness, the fat of some was yellow, when others from the same stable dressed white. The former, some epicures said, was the better meat—more juicy, sweet, and enjoyable; while some pathologists said this color was caused by bile, and this meat was not fit for food. Now is the color of bee-fat caused by the color of pollen each colony is in the habit of dining upon, or are some colonies "bilious"?

FEEDING OF QUEENS AND DRONES.

Queens, as well as drones, feed themselves. We have done a little more "trifling", watching numerous drones feed not from flowers but combs, and one day I uncapped 3 queen-cells about hatching, and put the young queens at open cells of nectar. Two drank a few moments, the other a quarter of a minute. It looks like the suggestion of your correspondent, "that they are only seeking drink", may be true, for there is a surplus of royal jelly, but no juice, in the cell after the queen emerges.

A worker seemed to offer food to the one that drank so much, which she refused. After the third refusal it handled her roughly a few seconds when she reciprocated a moment and was allowed to go in peace.

YOUNG QUEENS IN DRONE-CELLS.

In the midst of drone-comb was one cell built horizontal, but a little longer than the surrounding ones. The cap got rubbed off and a young queen was extracted whose abdomen was folded under the thorax; otherwise she seemed perfect, and the bees might have cut away the cell and let her out. But how came this queen-larva here—by the mother laying, porters carrying, nurses feeding and housing, or how?

QUEENS WITH RUDIMENTARY WINGS.

We have seen 2 queens born with only rudimentary wings, and could not fly. Full sisters in adjacent cells are all right. What is the cause? Their mother was bought from a breeder who has practiced clipping for years. Could such malformation by art in time cause "sports" to be produced by Nature? Will mating in confinement become a necessity with the "scientific" queen-breeder?

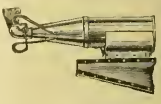
QUEENS' OUTINGS AFTER LAYING.

The actions of young queens were watched in a small nuclei with about a *handful of bees* each. Of six, 2 were absent at midday after laying. A few days later one had not returned; the other had layed some more eggs and was again absent. A few days later she, too, had not returned. Now their final disappearance is easily accounted for in this country where they have so many bird, reptile, and insect enemies, but how about the one returning and laying fresh eggs? Again, from another set of large nuclei, where queens were put to mate, some were missing. Later we found some of these in hives that were queenless and in colonies that had superseded their queens, preferring these. They were imported stock, and no other bees on the island like them. It looks like young queens, like drones, were free commoners.

Again, to make room for an imported Cyprian, we took a golden queen from her hive with two combs and a few bees. A week later, in looking up our Cyprians, we found the golden, although her bees were still in the nucleus where the two combs were put with her. It *seems* she had gone out alone, and on her return went to the old hive. Does Nature keep in working order muscles without exercise for a year or two? Does the queen help the young bees fan the hive, or keep herself in trim to stand a journey of some miles with a swarm, by going out for those health-giving conditions, fresh air, sunlight and exercise?

If bees have no ears, how originated the idea of rattling tin pans to cause a swarm to cluster? One day we had a colony in the operating room (operating in open air not being practiced where robbers are so abundant). The bees were all quiet when I started scraping a pan. Those in the hive forthwith started to sing "Home, Sweet Home". Those on the floor, and even on the window-sill, started to march toward the hive, singing as they went. If bees did this in Egypt a few thousand years ago, there has been ample time for the idea to grow. Jamaica, W. I.

Proceedings of Conventions



Report of the Southwest Texas Convention.

BY W. H. LAWS, SEC. PRO TEM.

(Continued from page 775.)

Then followed a discussion on the sizes of honey-cans. While there was a decided tendency to reduce the size of the two 60-pounds in a box, both for comb and extracted honey, it was thought best not to interfere at present unless the whole State will agree and adopt something less in size as a standard, for the dealers will have to carry a stock of the size named until all bee-associations in the State will adopt another size. On motion, it was decided to allow the use of the same standard packages as adopted by the State Association some years since.

The matter of transportation was taken up, and W. H. Laws, chairman of the committee appointed by the State Association, reported that in correspondence with representatives of the various freight and express companies, we are assured that by proper presentation by our bee-keepers' associations to the railroad commission, the concessions asked for will be granted.

The subject of the adulteration of honey was taken up, and it was reported that very little, if any, adulterated honey could be found on the market in Texas.

It was recommended by the Association that we adopt a trade label guaranteeing the purity of our honey, and, if practicable, join some honey-producers' association, warehouse our honey, and wait the proper time for placing our product on the market, as the rush on the early honey market by all the producers at one time has a tendency to demoralize the market, and prices would rule low the entire season, as they have this season—with a very short crop behind it the honey market is reported bare, and buyers eager, with little honey to be found. It was suggested that in the face of the cry of adulteration it is now a good time for the adulterators of honey to trot out their stuff, and it is conclusive that most of the honey that has been pronounced as adulterated by the ignorant was all pure honey.

It was ascertained that all the bee-keepers present were producers of bulk comb and extracted honey, and that there was no section honey produced except for exhibition purposes.

The president then called for those to stand who expected to produce section honey the coming season. None stood. Mr. Hyde then stated that it was his intention to produce section honey, and that the market on bulk comb was in danger of being overstocked.

EVENING SESSION.

The following members were appointed to arrange for the entertainment of the National Bee-Keepers' Association if it meets in the city of San Antonio next fall: H. H. Hyde, Udo Toepperwein, and A. J. Davis.

D. C. Milam, of Uvalde County, then read a paper on the

PRODUCTION AND GRADING OF EXTRACTED HONEY.

As I have been asked to talk on the production and grading of extracted honey, I will give a little of my experience in the last 20 years.

The first thing necessary is a good queen and plenty of bees at the right time. In order to have these it is necessary, some years, to feed them honey and artificial pollen. The bee-keeper must be the judge of that matter in the locality in which his bees are located. In our locality we need plenty of bees the first of April.

Another essential is to give the bees plenty of room at the right time. The smaller the hive the oftener one has to work them. Having tried several kinds of hives, I find the 10-frame dovetail suits me best. And as to the frame used, I prefer the all-wood Simplicity. I, myself, never extract, but always have assistants to do that, and they all prefer that kind of frame. The last two years I have tried shallow extracting frames, but they all prefer the Simplicity. I have also tried the Hoffman, but none of them like it.

Ten frames to the hive is preferable for extracted honey. In our locality the 9-frame hive frequently melts down, unless the frames are well built at the bottom. I also like a queen-excluder over the brood-chamber.

In order to produce first-class honey it is best not to let it remain on the hives too long. Our early honey is very thick when gathered, and it is often necessary to extract it by the time the frame is two-thirds sealed. If the honey is allowed to remain in old combs long, it will change its color and flavor. It never makes catclaw and "wahea" honey any better to stay on the hives. It should be extracted as soon as it is ripe, and it is often ripe before it is all sealed; but of course a bee-keeper should never extract unripe honey.

When honey is extracted it should be strained, put into a vessel to stand until it settles, and then drawn off in cans. I find that a galvanized-iron tank is best to pour the honey in to settle. A wooden barrel is a nuisance in our part of the country, as it is always leaking. Never draw off honey so low that particles of comb run out of the tank into the can.

Honey, to be first-class, should be free from foreign substances, light in color, and of pleasant flavor.

D. C. MILAM.

Considerable discussion followed, in which the fact was brought out that it took some skill in producing a first-class article of extracted as well as of comb honey. Mr. Milam then told how, on one occasion, he had extracted honey too closely, and later his bees were at the point of starvation; that he had for two weeks gathered the large, ripe prickly-pears that so plentifully abounded in his locality, pounded them up in a large trough, and had not only kept his bees alive, but they had used the juice of the pear in breeding up for the honey-flow that followed, but he advised that it was cheaper and better to buy a low grade of sugar instead; that the bees only took the pear-juice because they had to.

On motion a committee was appointed to confer with the associations of the State, asking that a scale of prices be made for first-grade bulk-comb and extracted honey, so that we can in harmony and intelligently price honey to the trade the coming season.

Willie Atchley, Dr. C. S. Phillips, Harley Johnson, Dr. J. B. Treon, D. M. Edwards, W. D. Bunting, W. O. Victor, H. H. Hyde, W. E. Rector, and L. Stachelhausen were appointed as such committee.

On motion the following scale of prices was recommended by this Association: Bulk comb, 9c; extracted, 7c; taken on a two 60-pound basis.

The committee is to supply the prices for the lower grades.

W. O. Victor told of the trapping and killing of eight bears in his apiaries; also of the experiment of shipping a car-load of bees to Colorado to catch the flow from alfalfa. Although cool weather and frequent hail-storms came that way, the experiment was a success. A vote of thanks was extended to Mr. Victor for his excellent talk.

Will Atchley told of the successful landing of a car-load of bees in Kansas the present season.

Then followed a long and interesting discussion on queens and queen-rearing. It was recommended that the queen-breeders organize a protective association. On motion of W. O. Victor, it was decided that at present queen-breeders should exchange "black-lists". It was brought out that at certain times certain individuals will order queens and bees from nearly all the leading queen-breeders at the same time, with the intent of defrauding; then no more could be heard from them. This fact was brought out more fully by the exchange of names of those who had defrauded the queen-breeders present at this convention. It was requested also that we ask some one of the leading bee-papers to assist us in this matter.

The following were elected as officers for the ensuing year: President, H. H. Hyde; vice-president, Will Atchley; secretary, A. I. Davis.

W. H. LAWS, *Sec. pro tem.*

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Women at Bee-Conventions.

Indications are that the attendance of the sisters at bee-conventions is steadily, if slowly, on the increase. The time was when they were as scarce as men at a prayer-meeting, and the first comer was always in terror for fear she would be the only one of her sex in attendance. Not that the brethren have ever made any objection to the sisters coming—in fact, they have always seemed glad to have the sisters come—but somehow the sisters didn't come. Perhaps they didn't know what an interesting place was a live convention of bee-keepers. Many a thing to be learned there that you can't get from the books or bee-papers. Then it's a pleasant thing to see in the flesh many a one whose writings in the papers have given you a desire for a better acquaintance.

If any of the sisters wants to attend the liveliest kind of a live convention, let her come to Chicago Nov. 30. No need to fear that they'll seat you between two of the brethren—unless you prefer that sort of seating—for there are always enough of the sisters to be bunched together in a very sociable sort of way. Wouldn't it be a nice thing if enough of the sisters could be there to have it reported that the percent of sisters in attendance was greater than at the National or any of the State conventions? There are easily enough of the sisters within convenient reach of Chicago to make such a thing possible.

Another thing: Don't forget to bring along any question that you'd like to hear discussed; not necessary to put your name to it, just put it in when the hat is passed. The question-box is likely to be the best part of the convention.

Honey and Sugar Chemically Considered—Some Reflections on Mr. E. E. Hasty's "Afterthoughts".

Relative to the subject of the crystallization of sugar in honeys, it is my opinion that when a normal dilute honey is allowed to stand for some time, either in a warm place or when open to evaporation, the crystals which deposit are crystals of dextrose, and the supernatant liquid contains the lævulose. It has been shown in the laboratory of the Illinois State Food Commission that these crystals so deposited have a dextrorotatory power, while the liquid portion above the crystals is lævorotary to a greater extent than normal honey. It requires a concentrated solution of honey to deposit lævulose in any form, as lævulose does not crystallize or granulate readily. To have granulated or candied honey, we must have a concentrated honey which has been allowed to stand for a time in a warm place, or in open air, or both.

In my opinion the dextrose crystallizes first, and the lævulose intermixed granulates, and these sugars so deposited form the honey that is marketed in paper bags.

I do not believe that the dextrose of honey will eventually be found to be a varying mixture of several different compounds, nor do I believe we should entertain such a thought respecting the simple sugars. They have repeatedly been proven to be simple chemical substances of carbon, hydrogen and oxygen atoms. The term "glucose" is liable to be confounded when, as we permit it now, it may refer to either pure dextrose or to a mixture of dextrose and dextrin. The former is a definite simple substance, and the latter a compound of a sugar and a gum. Watt and Allen look with favor upon the plan of calling the pure glucose, dextrose; and the commercial glucose, glucose. The sooner we learn to designate each by these terms the sooner will a good deal of inconvenience in naming these substances be done away with. There are enough chemical terms already in the nomenclature of the chemical realm, and anything which has a tendency to lessen our woes in this line I am sure will receive a glad welcome from both chemists and laymen. May we all aid as far as we can to speed that day.

(MISS) LUCY F. DOGGETT,
Cook Co., Ill. *Assistant State Analyst of Illinois.*

Beauty Lotion—Honey-Cake.

A lotion to whiten the skin is made by combining four ounces strained honey, one ounce glycerin, one ounce rose water, three drams citric acid, and six drops essence of ambergris. Apply a little to face and hands two or three times a week, using a linen pad for the purpose.—Chicago Record-Herald.

Honey-Cake—One cupful of extracted honey, one-half cup beef drippings, two cupfuls flour, two scant teaspoonfuls soda, two eggs, one cupful candied seedless grapes from which the juice has been strained, one-half cupful of the juice, one teaspoonful each of ginger, cinnamon and nutmeg. Bake and serve as gingerbread.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses. By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

CALIFORNIA ALFALFA—NECTAR-SECRETION.

We didn't expect to hear that part of California itself was as badly off as ourselves in failing to get honey from alfalfa. California is the Plymouth Rock on which alfalfa landed; and there has been considerable time for the adjustment of the plant to the climate, if that is what is wanted.

I hope our excellent Prof. Cook will not think I object just for the purpose of being hateful to his conclusion about the cause of honey-secretion. Seems to me that the conclusion is inconclusive, both as a matter of theoretical logic and also as a practical matter. I grant that a moist soil, a dry atmosphere, and heat, are three very excellent conditions to start with; but they hardly comprise all—perhaps not even almost all. I would submit this:

The cause of abundant nectar-secretion is the *joint presence* of several different things; and apparently we do not yet recognize all the items. The best conditions for pollenization, the best conditions for the right insects to be out, and the best conditions for nectar-secretion, are likely to be identical, seeing they three work together for a joint purpose in Nature. It even looks as if moist atmosphere and dry atmosphere did some *alternating* at the behest of other items in making up the best set of conditions. During some phenomenal flows dry air—and during some phenomenal flows moist air—is the way I think we'll find it when a full supply of observations is in. Page 693.

INDOOR WINTERING OF BEES.

H. R. Boardman is high authority on wintering bees, and his ripened, life-long conclusions merit our careful study. He is rather unique in having good success above ground. We may well suspect that bare above-ground and below-ground count for nothing—only the pertinent conditions, conditions, *conditions*, which happen to be a little easier to secure when below. Some of us would have built the rooms without windows. Perhaps his windows and the admission of light as long as the bees will bear it may have counted quite heavily in his favor. Much has been negatived and much has been changed during the long years. A complicated system of ventilation was thrown away as worse than useless. Quieting the bees when they roar by letting in outside air at night has also been abandoned as worse than useless. (Quiets the bees temporarily, but increases the mischief that caused the disquiet in the first place—makes them start more brood.) Manifestly it takes time and brains, and close observation, to reach the hardpan of correct practice when it lies as far down as that. Setting bees out for a flight, and putting them back again, has been negatived—also waiting for a warm, pleasant day to set them out for keeps. Fire he finds good when needed, only it must be in an adjoining room, and the warm air used with discretion. He "sour grapes" exact evenness of temperature because he has not been able to secure it. That probably is one of the penalties which he pays for being above ground. Favors for the latter part of the winter a temperature higher than most of the brethren prefer. Perhaps that's "sweet grapes"—easier to secure than not; and he finds it can be tolerated. His last great change is a singular one. Gives up the manifest advantage of bees in two rooms in order to have a larger volume of perfectly pure air to conjure with. Pages 694 and 696.

HONEY-TREES ON THE MOUNTAINS.

Honey-trees on a rugged mountain, and such culls that nobody wants them for lumber, constitute a very valuable asset for the bee-man. Page 700.

ON THE WIRING SHALLOW FRAMES.

Seven of the experts want shallow frames wired, and 19 say no—some inclining to negative wiring both for shallow frames and deep ones. Page 709.

SOME OF THE BEE-KEEPERS' GLUCOSE STORIES.

Prof. Eaton gets after us with a very sharp and penetrating stick, anent the fibs we tell about glucose, because we hate the stuff so. We see ourselves picking ourselves up and remarking that we didn't know that it was loaded. But for all that we should manage to remember the important facts, that hydrochloric acid, and not sulphuric acid, is used in glucose factories in this country; and soda, not lime, for the neutralizing alkali. We've been attacking a man of straw while the real man sat on the fence and grinned. Page 710.

Ask Doctor Miller ??

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Colony Queenless Late in Fall.

If you had a colony of bees quite strong with a lot of drones, that was discovered as late as Nov. 1 to be queenless, what would you do with it? Illinois.

Answer.—I don't know; it would depend upon circumstances. Before doing anything with it, I should want to be quite sure it was queenless. "A lot of drones" in a strong colony in the fall is not always sure proof of queenlessness, although something depends upon how large the "lot" is. The absence of all brood Nov. 1 is no proof of queenlessness, neither is the failure to find a queen, for the queen is hard to find, because small. Unless you have some stronger proof than the presence of drones, better leave it till spring, and then break it up, dividing the combs and bees among your weakest colonies. If sure it is queenless, you can break it up now. In any case it will do no great harm to leave it till spring.

◆

Wintering Bees—Probably Chilled Brood.

1. My bees are in bad condition, and I should like to know how large the cluster should be in diameter in order to insure its safe wintering.

2. What should be the amount of its winter stores for wintering indoors?

3. Last spring I discovered a few colonies affected with some disease which looked like pickled brood. There was some dead brood, sealed and unsealed, which disappeared when warm weather came, so I thought it was chilled brood. What was it? New York.

Answers.—1. It's hard to put in cubic inches just how small a cluster might be to get through the winter all right. Under favorable circumstances, with just the right temperature and ventilation, quite a small cluster may pull through in a good cellar, even one with only enough bees to fully cover two combs. The chances are much better if there are enough bees to cover three combs, and if there are bees enough to cover four or more combs there ought to be no trouble.

2. That varies very greatly. It is not so much what they consume while in the cellar, as the amount they need when brood-rearing goes on after the bees are taken out of the cellar. The safe thing is to have 30 pounds of honey for stores, although not the half of that may be needed in the cellar.

3. Hard to say. Likely it was only chilled brood, but it will be well to keep a sharp lookout next year.

◆

Foundation in the Sections—Unfinished Sections—Swarms Returning to the Parent Hive.

1. Do you use thin or extra-thin foundation in the sections? I have been using thin, and find the bees cut lots of it out of the sections.

2. Do you use, or know of, any extractor that can be used for extracting honey from unfinished sections, regular size?

3. I was troubled with prime swarms returning to the parent hive last spring. After putting them in nice, clean, new hives they would go back to the old hive. Some four or five did that, three of them coming out again in a week, the others not coming out again at all. This was the first year they ever did this. Was it general all over the country last year, or was it the fault of the queen? Missouri.

Answers.—1. I use thin. The extra-thin is torn down by the bees worse than the thin. If you use the thin you will probably not have much trouble about tearing down, unless you leave the sections on a good deal too long after the harvest is over.

2. Yes, I have extracted unfinished sections, but not of

late years. By returning unfinished sections as "go-backs" up to the very last of the harvest, the number of unfinished sections will be comparatively small, and those that have too little honey in them to be used at home, or sold at reduced price, are emptied by the bees. Any extractor can be used for extracting sections. Make a frame to hold the sections similar to the wide frames used by some for surplus honey; put coarse wire-cloth on one side, or fasten wires on it, and by a little care in handling you will need nothing more. Or, you can have a wire side to fasten on after the sections are put in the frame.

3. I think there was no general complaint of that kind, and the year probably had nothing to do with it. Something in the condition of queens or colonies was accountable for the trouble no doubt, and under exactly the same conditions you may look for the same results next year, or any year.

Tiny Insects and Comb Honey.

When I take off comb honey, removing the sections from the section-holders, I always find hundreds of tiny insects resembling chicken-lice. I would like to know what they are. LOUISIANA.

ANSWER.—I haven't any idea what they are—never heard anything of the kind before. You don't say whether they are in the supers when taken first from the hives, or whether they get in afterward, but I suppose they get in afterward, as I don't believe the bees would suffer them while the supers are yet on the hive. The only "small fry" to be found in the hives are the bee-lice, which are somewhat troublesome in Europe, but for some reason do not flourish on this side.

Cellar-Wintering of Bees.

If I raise the hives one inch from the bottom-boards will that be ventilation enough for cellar-wintering? WISCONSIN.

ANSWER.—That will do very well; if you mean the hive is raised so that there is under it an inch space on all four sides, probably a deeper space would do no better; but if you mean there is a space only at the front, a deeper space would be a little better. My bottom-boards are two inches deep, with the whole front open and the other sides closed.

Extra Stories Under the Colony.

My bees are in 8-frame dovetailed hives, and are wintered on the summer stands in a sheltered place. Last month I put a second hive with frames (not full) of honey, or a super with sections not all capped, under each one. Most, or all, of the honey has been carried up. Shall I remove the extra hive or super, or shall I leave them as they are? And why? Colonies are all strong, and have abundant stores. NEW YORK.

ANSWER.—Likely it will be better to leave the extra stories underneath. It makes less danger of dead bees clogging the entrance, and the cluster can not so directly be affected by the outside air. But it may be better to reduce to one story when the bees get to flying daily in the spring; they like to have their brood-nest pretty close to the fresh air.

See **Langstroth Book Offer** on another page of this copy of the American Bee Journal.

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OUR HIVES AND SECTIONS
Are Perfect in Workmanship and Material.
By sending in your order NOW, you will SAVE MONEY, and secure prompt shipment.
We will allow you a cash discount of 5 percent on orders sent in during November.
PAGE & LYON MFG. CO., New London, Wis. U.S.A

Reports and Experiences

Honey Crop Almost a Failure.

I have 67 colonies of bees, mostly Italians, but this has been a hard year on them in this locality. The spring was wet and cold, and they almost starved. We got no surplus from white clover, then the fall flowers bloomed in all their glory, and the bees began to hum merrily, but the nights were too cold. I secured only one-third as much honey as last year. Two banner colonies stored 3 supers each in about 30 days. These were golden Italians. We hope for better things next year.

I can't give up the "Old Reliable", even if the honey crop is almost a failure. I love to read it.

W. R. M. COYLE.

Vernon Co., Mo., Nov. 14.

Method of Rearing Good Queen-Cells.

In my letter, page 740, the sentence that reads, "So far as good queen-cells are concerned their equal never was", should have read, "So far as good queen-cells are concerned their equal may have been, but their better never was". Well, that would sound better,

This Lightning Lice Killing Machine
kills all lice and mites. No injury to birds or feathers. Handles any fowl, smallest chick to largest gobbler. Made in three sizes. Pays for itself first season. Also *Lightning Lice Killing Powder, Poultry Bits, Lice Murder, etc.* We secure special low express rates. Catalog mailed free. Write for it.
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NOW, while we can serve you PROMPTLY, and get them at BOTTOM PRICES.
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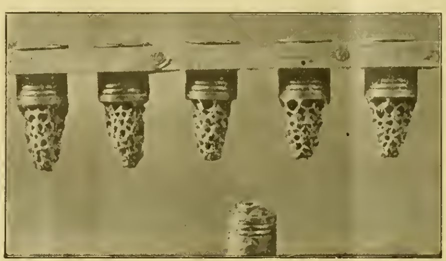
Engravings For Sale
We are accumulating quite a stock of engravings that have been used in the American Bee Journal. No doubt many of them could be used again by bee-keepers in their local newspapers, on their stationery, or in other ways. Also, if we can sell some of them it would help us to pay for others that we are constantly having made and using in our columns. If there is any of our engravings that any one would like to have, just let us know and we will quote a very low price, postpaid. Address,
GEORGE W. YORK & CO.
334 Dearborn Street, - CHICAGO, ILL

STRAWBERRY AND VEGETABLE DEALERS
The Passenger Department of the Illinois Central Railroad Company have recently issued a publication known as Circular No. 12, in which is described the
best territory in this country
for the growing of early strawberries and early vegetables. Every dealer in such products should address a postal card to the undersigned at DUBUQUE, IOWA, requesting a copy of "Circular No. 12."
J. F. MERRY, Asst. Gen'l Pass'r Agent.
32A20t Please mention the Bee Journal.

too, as I believe some others can rear just as good queen-bees as I can.



The frame shown on page 737, and again herewith, is not intended to have cells drawn in, but merely to hold them from the time they are sealed until they are to be caged (5 or 6 days) in some queenless colony. The cells are grafted and placed between the top-bars of a colony that has not been queenless longer than 12 to 18 hours. (I usually make the colony queenless in the evening, and graft the cells the next noon.) By removing one frame from a 10-frame hive one can spread the frames in three places, and three cells may be placed in each of the outside rows, and four in the center one. In 5 days the cells (I usually get about 8) will be sealed, and should be removed to the frames and placed in a queenless colony. I keep 4-frame nuclei for this purpose, letting them fertilize a queen every other week. Then a laying queen is introduced in the colony in which the cells were completed. If the same queen that was taken from them is returned (they can be kept caged), I don't bother about destroying the cells that they may have built on the combs, but I give them a good smoking at sundown, and let their queen run in at the entrance. If honey isn't coming in freely I feed honey—sugar is not fit to rear queen-bees on, if I am to be the judge. I dilute the honey with water, and get about the same results as though honey were coming in. A new colony is used each time, and they will keep on pounding away in the supers almost the same as if they had not been disturbed. The colony should

REDUCED PRICES

Good for the Balance of This Season Only.

As I desire to unite my nuclei as soon as possible, I will sell ITALIAN QUEENS at the following low prices, until my present supply is exhausted:

Untested Queens, 60 cents each; six or more, 50 cents each. Select Untested, 75 cents each; six or more, 60 cents each. Safe arrival and satisfaction guaranteed. Send for circular and read reports from enthusiastic customers.

J. P. MOORE,
39Atf Morgan, Pendleton Co., Ky.

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Original Direct-Draft Bee-Smoker.

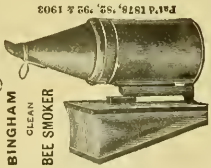
26 Years. BEST ON EARTH.

I think a few of the many letters I receive will interest you more than anything I could write. Of course you would like to know why Bingham Smokers go without puffing and smoke all the time and are always ready. FULL OF SMOKE and burn anything dryish and never go out just when you want smoke the most and quick. I have not room to tell all about them, but they DO ALL the above things to perfection. But what I wish to say is,

SEND FOR CIRCULAR.

T. F. BINGHAM, Farwell, Mich.

DEAR SIR:—We have used and sold all the advertised smokers, but find none that suit us as well, or that find as much favor with our patrons as the Bingham smoker. They have no equal. THE FRED W. MUTH Co., Cincinnati, Ohio. May 19, 1904.



Mont. Vista.

This delightful 20-acre place situated at Griffin, Ga., is now for sale. 1000 feet above sea-level, affords a delightful climate. Especially suited for poultry, bees, and small fruit. Griffin is a manufacturing town of 8000, making a home market at high prices. Full particulars from owner.

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43A4t 1715 RAILWAY EXCHANGE, CHICAGO.

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Every kitchen needs a knife sharpener. Every woman will appreciate the LIGHTNING KNIFE SHARPENER — a new kink for the kitchen. It's cheap, but it's nicely made and finished, and will wear well. Puts a keen edge on the knife and saves the stovepipe. *Sample mailed for only three 2-cent stamps*. Order at once—they are going like hot-cakes.

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1½ Story Dovetailed Hive $1.25

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WHOLESALE AND RETAIL.
Working Wax into Foundation for Cash a Specialty.
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GUS DITTMER, Augusta, Wis.

not be used again until the queen is making the second round, about 4 or 5 weeks later. The cells shown measure (taking them from left to right) the first, one inch; the second, 99–100; the fifth, 87–100 below the base of the shell, and extend ¼ to ⅜ of an inch in the shell. About ⅝ of an inch below the base of the shell is as short as I save, destroying those that are under that. CHAS. M. DARROW.

Vernon Co., Mo.

The "Bidsom" Bee-Feeder Again.

Referring to Dr. Miller's answer to "Illinois", on page 698, I would say there is no advantage of the so-called "Bidsom Feeder", described on page 588, over the "Original Miller Feeder", as shown in "Forty Years Among the Bees", on page 125, for it is simply that idea adapted to the Danzenbaker super which I am using; but as a home-made article its advantages over the improved "Miller Feeder", as listed in supply catalogs at 35 cents each, are these:

1. Its cost is practically nothing, to any one in the least handy with tools in cutting up old store-boxes.

2. Its use with the Danzenbaker super, being made up separate so as to hang inside of the super; and which, by slight alteration, may also be set on the end (tin) supports inside of any other ordinary section super.

That is all; no competition what-

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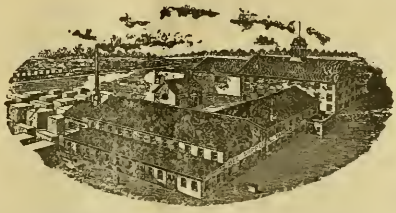

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J. G. BOUGHTER.

Carbon Co., Pa.

Bees in Box-Hives—Spraying Fruit-Trees.

My bees averaged 50 pounds, spring count, last year, and only about 25 pounds this year, owing to serious loss by high water. I have had bees for several years, but kept them the old way—in boxes—and got very little honey until the last two years. I chanced to get a bee-paper which gave me many pointers, and while not yet an expert, I have a small library of bee books and papers which help me out.

Bees in this vicinity are almost all kept in boxes, and their owners say, "Bee-keeping doesn't pay". I have 59 colonies, and find a home market that I can't nearly supply. I use small frames, 4½x17½, instead of pound sections in the supers, and sell chunk honey.

I make my hives during winter days, and use four colors of paint so as to have no two alike in color in the same group. I have but little trouble with queenless colonies. I have 20 acres of trees and small fruits which I spray heavily every year with arsenic, and have no bees poisoned, by spraying after the bloom falls. I regard the work of the bees in fertilizing the bloom of more value in the fruit crop than the honey they obtain from the bloom. I think there should be 5 colonies to every acre of bearing fruit-trees of average size, to secure thorough pollenization of the young fruit.

My box-hive neighbors are not ready to subscribe for the Bee Journal, but don't fail to send it to me.

J. W. TUCKER.

Linn Co., Kans., Nov. 1.

Poor Honey Year—Japanese Buckwheat.

I commenced in the spring with 15 colonies, and increased to 25. I have taken from 17 colonies 870 pounds of No. 1 section honey, selling my entire crop for 15 cents per pound, about 20 miles from my apiary.

My best colony this year produced 88 pounds of section honey. This was a poor honey year here, notwithstanding there was an abundance of white clover, but there was not much nectar in it; too cold and too much rain.

From 2½ acres of buckwheat I got 300 pounds of honey and 50 bushels of seed, which is worth $1.25 a bushel. It's the pure Japanese variety.

I have been taking the American Bee Journal one year, and it is grand. I couldn't possibly do without it.

A. E. PATTON.

Lawrence Co., Mo., Oct. 24.

Honey Crop Below the Average—Red-Clover Queens.

The honey crop in this locality was below the average, and in some places it was poor. I harvested about 2000 pounds from 29 colonies, spring count, 1600 pounds of which was extracted and 400 comb honey. It was all gathered from white clover. Basswood bloomed, but the bees could gather nothing from it. The demand for honey is larger than the supply.

I haven't much faith in red-clover queens. Each year, in this locality, there are from 200 to 300 acres of red clover within easy reach of the bees, and I have tried a few red-clover queens, but their bees gathered no more honey than the others. Of course they gather a little, but we can not talk of a big red-clover crop.

HUGO MAEDER.

Washington Co., Wis., Nov. 16.

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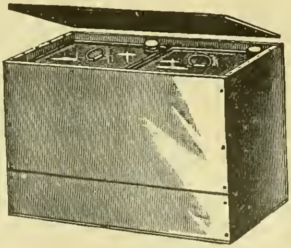

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A sample of either, by mail, 10 cents, to pay for package and postage. By freight—two 60-pound cans of Alfalfa, 8½ cents per pound; 4 cans or more, 8 cents a pound. BASSWOOD Honey, half-cent more per pound than Alfalfa prices. Cash must accompany each order. You can order half of each kind of honey, if you so desire. The cans are two in a box, and freight is not prepaid. ABSOLUTELY PURE BEES' HONEY.

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CONVENTION NOTICES.

Illinois. — The Chicago-Northwestern Bee-Keepers' Association will hold its next annual meeting on Wednesday and Thursday, Nov. 30 and Dec. 1, 1904, in the Revere House, southeast corner of North Clark and Michigan Sts., Chicago. The prospects are that this convention will be the largest and best ever held by the Chicago-Northwestern. Prominent bee-keepers from a distance have said they were coming. It will be a great time. Everybody at all interested in bees or bee-keeping is urgently invited to be present. There will be live discussions of live subjects relating to bee-keeping. Come. It's Nov. 30 and Dec. 1. And Chicago is the place!

Park Ridge, Ill. HERMAN F. MOORE, Sec.

Pennsylvania.—The Pennsylvania State Bee-Keepers' Association will hold its fall convention in Harrisburg, Tuesday and Wednesday, Dec. 6 and 7, 1904. An excellent program has been arranged. Many subjects of vital interest will be ably presented. General Manager N.E. France, of the National Bee-Keepers' Association, will be present, as well as other prominent bee-keepers. Every bee-keeper in Pennsylvania should interest himself in this meeting. D. L. WOODS, Sec.

Mnncy, Pa.

Minnesota.—The Minnesota Bee-Keepers' Association will hold its next session in the First Unitarian Church, corner 8th St. and Mary Place, Minneapolis, Minn., on Wednesday and Thursday, Dec. 7 and 8, 1904, beginning at 9:30 a.m. on Wednesday. Among the subjects to be discussed and papers to be read are the following: "Some things I have learned about bee keeping," by H.V. Poore; How to increase your bee-pasturage," by Fred A. Krause; "Diseases of bees and legislation pertaining thereto," by Wm. McEwen; "Poultry as an adjunct to bee-keeping," by Victor D. Caneday; "Bee-keeping as an occupation," by J. H. Kimball; "Insuring bees," by C H. Harlan; "Late feeding," by A. D. Shepard; "Selling honey through grocers," by George W. York; "Size of hive relative to the honey-flow," by Dr. L. D. Leonard; "A talk," by Ernest R. Root; "Honey exhibit at State Fair," by D.C. Hazelton; 'Queen-rearing and managing out-apiaries," by J. H. Siple.

On Wednesday evening there will be stereopticon lectures by Prof. F. L. Washburn, State Entomologist, 25 minutes, and Ernest R. Root the balance of the evening.

All are invited to attend this convention.

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Honey and Beeswax

OUR TOIL DOTH SWEETEN OTHERS

CHICAGO, Nov. 7.—There is not demand sufficient to take the receipts; hence are accumulating, off grades of the surrounding territory. Fancy white clover brings 14c; other No. 1 to fancy white, 12½@13c; off grades 1 and 2c less; amber, 10@12c. Extracted, white, 6½@7c; amber 6@7c; all of the foregoing is governed by quality, flavor and kind of package. Beeswax, 28@30c per pound. R. A. BURNETT & Co.

KANSAS CITY, Sept. 22.—Market on comb honey is quite active at $2.75 per case for fancy white stock. Extracted rather slow at 6½@7c. We look for the demand on extracted to pick up considerably with cooler weather. Beeswax in good demand at 30c per pound.

C. C. CLEMONS & Co.

BOSTON, Oct. 24.—We are pleased to note an increased demand for honey, which with comparatively speaking, light receipts, makes prices firm. We quote fancy white, 16@17c; No. 1, 16c; with but little No. 2 on hand or to be had. Extracted, light amber, 7@8c.

BLAKE, SCOTT & LEE.

CINCINNATI, Oct. 28.—There is a marked improvement in the demand for comb honey since our last quotations. No material change in the extracted-honey market. We continue to quote white clover extracted honey in barrels and cans at 7@8½ cents; amber in barrels, 5¼@6c. Fancy white clover comb honey, 14@15c. Beeswax, 28c. THE FRED W. MUTH Co.

ALBANY, N.Y., Nov. 9.—The crop of honey is turning out to be larger than estimated, and prices are softening, favoring the buyer. We quote fancy white, 15c; A No. 1, 14c; No. 1, 13c; mixed, 11@12c; buckwheat, best, 13c; average run, 11@12c. Extracted, buckwheat, 6c; white clover, 6½c; mixed, 6c. Beeswax, 29@30c.

H. R. WRIGHT.

NEW YORK, Nov. 7.—Receipts are now plentiful of nearly all grades. The demand is not quite as brisk as last year, and only fair. We quote fancy white at 14@15c; No. 1 white, 13c; lower grades at from 10@12c; buckwheat, 9@11c, according to quality. There is fairly good demand for extracted honey at unchanged prices. Beeswax dull at from 28@29c.

HILDRETH & SEGELKEN.

PHILADELPHIA, Nov. 10. — Shipments have been quite heavy in the last two weeks. Prices are a little weaker in consequence, although fancy honey maintains a good price. We find the shortage is always in the fancy goods, and the off goods are what overstock the market. We quote: Fancy, 16@17c; No. 1, 14c; amber and No. 2, 12@13c. Extracted, white, 8c; amber, 6@7c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

SAN FRANCISCO, Nov. 9.—White comb. 1-lb sections, 12@13 cents; amber, 9@11c. Extracted white, 6@6½ cents; light amber, 4½@5½c; amber, 3¾@4¼c; dark amber, 3@3½c. Beeswax good to choice, light, 29@30c; dark, 27@28c.

The German ship Altair, sailing the past week for London, carried 445 cases extracted honey. Movement on local account is not very brisk and is mainly in best qualities. Only for choice to select does the market show firmness.

CINCINNATI, O., Nov. 7.—Comb honey is now coming in more freely, and prices if anything have moderated a little. The sales made and prices obtained were for No. 1 fancy water-white comb, 13@15c; No. 2, 12@14c. Extracted is sold as follows: White clover, in barrels, 6½ cents; in cans, 7½@8c; amber, in barrels, 5¼@5½c; in cans, 6@6½c. Beeswax, 27c.

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American Bee Journal

MASSACHUSETTS AGRICULTURAL COLLEGE

44th Year. CHICAGO, ILL., DEC. 1, 1904. No. 48.

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FOR 1905

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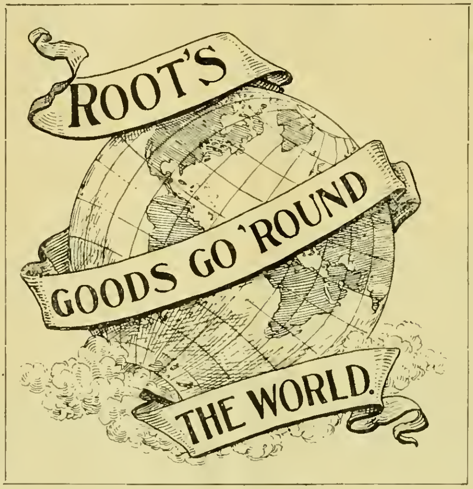

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The L. A. Watkins Mdse. Co., Denver, Colo.
Vickery Bros., Evansville, Ind.
Portland Seed Co , Portland, Oreg.
Lilly, Bogardus & Co., Seattle, Wash.

There are hundreds of others handling our Supplies but lack of space forbids our giving their addresses.

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THE OLDEST BEE-PAPER IN AMERICA

Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

GEORGE W. YORK, Editor. CHICAGO, ILL., DEC. 1, 1904. Vol. XLIV—No. 48.

Editorial Notes and Comments

"Spread with Honey."

L. E. Anderson, of Tennessee, has sent us a clipping of an advertisement put out by the National Biscuit Co., in which they advise people to eat their biscuits "spread with honey". This is certainly good advice, and if given repeatedly in advertisements it should help to increase the demand for honey. Surely, the National Biscuit Co. has set a good example. As Mr. Anderson says, it sounds somewhat better than "spread with maple syrup". Whenever the day comes that the National Bee-Keepers' Association feels that it can spend some money in advertising honey, we believe that bee-keepers will find a greatly increased demand for their product.

Sugar vs. Honey for Bees.

In the European bee-papers the question of feeding sugar to bees is being discussed with some warmth. Testimony from actual experience is given on both sides. All are agreed it is better to feed bees sugar than to let them starve; and that it is better to replace unwholesome stores with sugar. It seems to be understood, also, that with nothing but sugar syrup in the hive no brood can be reared, because the building of tissue requires the nitrogenous matter that is contained in honey and in pollen, but absent in sugar.

Indeed, in this country reports have not been lacking where bees refused to rear brood in spring when confined to honey alone, the amount of floating pollen in honey seeming insufficient for that purpose. The anti-sugar men seem to have pretty good reason on their side when they claim that a food which lacks material to build up young bees must also lack material to keep up the vigor of old bees; and that although it may not be easy to demonstrate the difference, it is reasonable to suppose that a colony supported for a time on the nitrogen-lacking sugar will not have quite the same vigor as when supported on the fuller food.

In any case it seems a pretty safe thing to consider a good quality of honey the standard. If something else had been better as a general rule, would not Dame Nature have so provided?

The Combat with Foul Brood.

It may be going a long ways from home to find in a trans-Atlantic journal what is being done on this side the water; but nowhere probably can a finer resume of the situation here be found than in a report made by Mr. Thos. W. Cowan, and published in the British Bee Journal. That gentleman evidently did no small amount of correspondence to secure the facts so fully, which are thus given:

> They had two different plans in the States; in some cases an inspector was appointed for the whole State, while in others inspectors were appointed for the different counties. A single inspector for California (which was as large as England and Scotland together) would be of no use at all. There were large tracts of country in that State in which no bee-keepers were located. Therefore, the county plan was adopted. He had written altogether to ten different States for information, namely, Michigan, Colorado, Wisconsin, New York, Ohio, Texas, California, Idaho, Nebraska and Utah, and had received from each the laws and regulations under which they work, and comprehensive reports. He had inquired how the inspectors were appointed, also about cost of administration, and statistics of results.
>
> Michigan stated that the State Bee-Keepers' Association recommends, and the Dairy and Food Commissioner appoints. The salary is $500 a year for one inspector, but is not enough, and will be increased. The inspector says:
>
> "This law was passed three years ago, and at that time the lower half of the lower peninsula of our State was practically seeded down with the disease. It is almost a Herculean task to free the State from the disease. A few localities have been cleared, in others it is kept in check, and is being kept out of the northern part of the State. It is largely a matter of education and getting bee-keepers to recognize it, and try to get rid of it."
>
> Colorado had 14 counties and 14 bee-inspectors. The cost of each inspector varied from $25 to $350, the average being $100, that was $1400 for the whole State, or $5 per day, and $2 per half day in payment of work done. His informant called attention to defects in the State's law, an important one being there was no clause which would prevent the importation of disease; also, that there were no means of exacting a faithful fulfilment of duty by the inspectors, who were inclined to shirk their work when it was inconvenient to attend to it.
>
> Wisconsin's Act had been in operation for seven years; $700 per annum was allocated to the work, and the one inspector was appointed for two years. This inspector, according to the last report, visited 230 apiaries containing 12,493 colonies. In 66 apiaries there were 1608 diseased colonies.
>
> In New York State the Commissioner of Agriculture appointed four inspectors, the State being divided into four partitions for the purposes of bee-inspection. Each inspector received a salary of $800 and expenses annually. The Commissioner had supplied him (Mr. Cowan) with a voluminous report, from which it appeared that in the year 1900, in the contaminated localities, about 30 percent of col-

onies were diseased. Those figures had now been reduced to 5 percent, owing to the exertions of the inspector.

Idaho failed to obtain any legislative enactment.

In Ohio there was an inspector appointed by the governor of the State on the recommendation of the Bee-Keepers' Association, but no statistics of cost or report had been forwarded from there.

In California the inspectors were appointed on the petition of ten or more landed residents. The expenses allowed were $3 per diem. The law there was confined to counties, and as some of them had very few bees within their limits, only a few counties had inspectors. While admitting that much work had been done, it was remarked that in some cases the inspectors did not do their duty properly.

In Nebraska the governor appointed an inspector on the nomination of the Bee-Keepers' Association at a cost of $2 a day.

In Utah an inspector was selected by the Agricultural Commissioner, the cost being paid out of the treasury.

This was the gist of the information obtained from the United States, which he contended was on the whole favorable to legislation regarding foul brood, and showed that the action taken by the various States had been beneficial.

While very much has been done by way of laws on foul brood in the United States and Canada, it seems there is not as much uniformity about those laws as there should be. At least not only do some States need more stringent legal enactments, but many States have no laws at all on the subject, and yet need them very badly. The good work of practically all the bee-inspectors, where they have laws, should help the other States without such laws to get them very speedily, we think.

Supporting Foundation in Brood-Frames.

Full sheets of foundation in brood-frames are in quite general favor, and no little diversity of opinion prevails as to the means to be used to prevent sagging or buckling. To make foundation heavy enough so that no sort of support is needed is expensive. The better the support the less wax is needed in the foundation. The manner of using the wire, whether to be imbedded in the wax when the foundation is made or not, whether to have the wire run horizontally, vertically, or diagonally—these have been subjects of no little controversy.

Latterly there has come into notice the plan of supporting the foundation by means of wooden splints 1/16 of an inch square, boiled in wax and applied vertically at distances of two or three inches. The special advantage claimed is that by this means the comb may be built clear down to the bottom-bar solid, without any chance for the bees to crawl under. Certainly a frame entirely filled with comb clear out to end-bar and bottom-bar is a thing greatly to be desired. But bees seem to have a predilection for a clear passage-way between the comb and bottom-bar, and if such frames be given at a time when little or no honey is coming in, they will gnaw away the foundation so as to make a passage. It would be interesting if those who have tried these foundation-splints would report how far they have been successful in getting frames filled without pop-holes or passage-ways.

Miscellaneous News Items

Mr. Jas. A. Stone, secretary of the Illinois State Association, called on us for a few minutes last week when in Chicago with a car-load or two of lambs and hogs. He was able to sell at a good figure, so felt correspondingly jubilant.

* * *

The St. Louis National Convention Report is begun this week in these columns. We believe our readers will find it very profitable reading. We have tried to condense it somewhat, and yet not impair its value. We regret the delay in its publication, but we could not present it before, as the Association decided to take the report this year and issue it in pamphlet form. This change was more expensive for the National, but less for us.

* * *

Mr. W. C. Nutt, late of Iowa, but now, and for some time past, of Bee Co., Tex., was married Nov. 1 to Miss Lizzie Jones, the daughter of a prominent bee-keeper where he lives. A neighbor writes us that Mr. Nutt is one of their best bee-men, and in his wife he has a worthy companion and helper. The neighbor then adds: "It is the sincere wish of his friends that all their troubles may be *only little ones*". In this the American Bee Journal also desires to join. Mr. Nutt has been a subscriber to this paper for nearly 30 years.

* * *

Bees as a "Nature Study".—Dr. Edward F. Bigelow, of Stamford, Conn., lecturer at teachers' institutes, and "Nature and Science" editor of the St. Nicholas Magazine, wrote us as follows recently:

> For some time I have been endeavoring to advance the claims of honey-bees as an educational—"Nature Study"—topic. It seems to me that honey-bees are more available, more interesting and more practical for the schoolroom, and for teachers and pupils outside of the schoolroom, than certain other branches of entomology that have been more talked about and studied by teachers and pupils.
>
> I desire to obtain information of experiences with bees by teachers who have kept bees especially from the "Nature Study" standpoint. Also, will young people under 18 years of age, who have personally cared for bees, please write me of their experiences?
>
> Any suggestion from veteran bee-keepers for interesting teachers and pupils in bees will be much appreciated.
>
> EDWARD F. BIGELOW.

* * *

The Apiarian Exhibits at the Illinois State Fair this year were said to be "ten times as large as the whole honey exhibit at St. Louis, and all made by members of the Illinois State Bee-Keepers' Association". The result of the judges work is as follows:

Display of comb honey—1st premium, A. Coppin; 2d, Chas. Becker; 3d, G. M. Rumler.

Collection of labeled cases of white honey—1st, A. Coppin; 2d, Chas. Becker; 3d, Jas. A. Stone & Son.

Collection of dark honey—1st, Chas. Becker; 2d, A. Coppin; 3d, Jas. A. Stone & Son.

Case of white clover honey—1st, A. Coppin; 2d, G. M. Rumler; 3d, Chas. Becker.

Case of sweet clover honey—1st, A. Coppin; 2d, Chas. Becker; 3d, Jas. A. Stone & Son.

Case of basswood honey—1st, G. M. Rumler; 2d, A. Coppin; 3d, Chas. Becker.

Display of extracted honey—1st, Jas. A. Stone; 2d, Chas. Becker; 3d, A. Coppin.

Honey extracting on the grounds—1st, Jas. A. Stone & Son; 2d, Chas. Becker.

Display of candied honey—1st, Chas. Becker; 2d, Jas. A. Stone & Son; 3d, G. M. Rumler.

Display of beeswax—1st, Chas. Becker; 2d, Jas. A. Stone & Son; 3d, A. Coppin.

Frame of comb honey for extracting—1st. A. Coppin; 2d, Jas. A. Stone & Son; 3d, Chas. Becker.

Dark Italian bees—1st, Chas. Becker; 2d, A. Coppin.
Golden Italian bees—1st, Chas. Becker; 2d, G. M. Rumler.
Carniolan bees—1st, Chas. Becker.
Honey-vinegar—1st, Jas. A. Stone & Son; 2d, Chas. Becker; 3d, G. M. Rumler.
Designs in honey—1st, A. Coppin; 2d, Chas. Becker; 3d, Jas. A. Stone & Son.
Display of designs in beeswax—1st, Jas. A. Stone & Son; 2d, A. Coppin; 3d, Chas. Becker.

Illinois has for several years led all the State Fairs in the total amount of cash premiums offered in the apiary department. But it seems that Minnesota is now ahead. Illinois will have to do better hereafter if she wishes to keep in the lead.

Concerning the display, the Springfield State Register of Oct. 6 published these paragraphs, written for that paper by a bee-keeper:

LARGE HONEY EXHIBIT.

Editor State Register:—A bee-keeper from Sangamon County, who visited the World's Fair last week, made it his special business to see the honey exhibit at that Fair, and on seeing the display of honey and beeswax at our State Fair, says the latter exhibit occupies not less than ten times the space occupied by that of the former, and far excels in the quality of display.

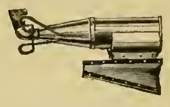
On inquiry we find that the owners of the exhibits at our State Fair are all members of the Illinois State Bee-Keepers' Association. And we further learn that one year ago Will B. Otwell (State Superintendent of Agriculture at the World's Fair) made application through the secretary of the State Bee-Keepers' Association for an exhibit of their product at St. Louis, and after a long-continued correspondence between them and the State Commission, the Commission could not spare the funds for Illinois to make an exhibit of one of her most attractive products. But when an automobile was wanted for them to tour the grounds, we see no lack of funds! So the State of Illinois, with all this beautiful honey exhibit at its State Fair, has not a pound of honey on exhibition at the St. Louis Fair.

A BEE-KEEPER.

The Acklin Out-Apiaries.—Two of H. G. Acklin's out-apiaries are shown on the first page this week. "Como Apiary" is near Lake Como and Como Park—said to be the largest and finest park in the Northwest. Mr. Acklin says it is nicer than any of the parks he saw when in Chicago! Mrs. Acklin and Miss Ethel are shown in the picture. This apiary is under the supervision of the Acklins, but is located at the summer residence of Wm. Rosbach, on the shore of Lake Como.

"Mora Apiary"—the other picture—is at the home of Wm. Klapmier. It is in his care, and is run exclusively for comb honey. Mr. K. and family are shown in the picture. Only a part of the apiary appears.

Proceedings of Conventions



THE ST. LOUIS CONVENTION.

Report of the 35th Annual Convention, of the National Bee-Keepers' Association Held at St. Louis, Mo., Sept. 27-30, 1904.

The National Bee-Keepers' Association held its 35th annual convention in the Auditorium of the Christian Endeavor Hotel at St. Louis, Mo., Tuesday, Wednesday, Thursand Friday, Sept. 27, 28, 29 and 30, 1904.

The opening session took place on Tuesday, Sept. 27, at 10 a.m., with Pres. J. U. Harris in the chair.

Dr. C. C. Miller, of Illinois, offered prayer.

On motion of O. L. Hershiser, a Committee on Rules and Order was appointed, consisting of Mr. Hershiser, of New York, A. L. Boyden, of Ohio, and F. M. Hart, of California.

Owing to the absence of Secretary Geo. W. Brodbeck, of California, through illness, out of courtesy to California F. E. Brown, of California, was elected secretary *pro tem.*

On motion of Mr. Pressler, of Pennsylvania, a Press Committee of five members of the Association was appointed, consisting of Messrs. Pressler, York, Abbott, Hutchinson and Root.

After a short intermission, the Committee on Rules and Order presented the following report:

RULES AND ORDER OF BUSINESS.

1. Reports of Standing Committees.
2. Reports of Special Committees.
3. Unfinished Business.
4. New Business.
5. Appointment of Committee on National Legislation.
6. Appointment of Committee to the President of the United States, setting forth the needs of this industry.
7. Reading of papers.
8. Question-Box.

The sessions of the convention shall be from 10 o'clock a.m. to 12 o'clock noon, and from 2 o'clock p.m. to 5 o'clock p.m., with no night sessions unless desired by a two-thirds majority.

No one shall be allowed to speak on any subject more than five minutes unless with the unanimous consent of the convention.

The invitations for the next convention shall be presented at the afternoon session of Sept. 28. The remarks of members presenting invitations shall be limited to ten minutes.

Respectfully submitted,
OREL L. HERSHISER, }
A. L. BOYDEN, } *Com.*
FRED M. HART. }

On motion the report was approved.

C. P. Dadant—It has been one of the objects of the Executive Committee of this Association, inasmuch as we were meeting at the World's Fair—an International World's Fair—to make this an international meeting, and the members of the Executive Committee instructed me to send invitations to the different bee-keepers' associations in the the world. This has not been very successful. We have, I think, one or two foreign representatives coming, and, with your permission, I will mention the answers I have received in response to our invitations.

Mr. Kramer, the president of the Swiss-German Association, writes me a long letter, in which he thanks us, and wishes he could come, but says he can not afford to, but hopes to be able to return the favor and invite us to one of their international meetings. The French representative at St. Louis was to have been here, but did not know the date of our convention until too late, and found it impossible to be here, as he has to be in Washington and Boston at this time.

Mr. Tipper, editor of the Australian Bee-Bulletin, of New South Wales, writes a letter in which he expresses sorrow at not being able to be present. He states that the Bee-Bulletin has been established over 13 years, and is the official organ of the New South Wales Bee-Farmers' Association, and also the Victorian Apiarists' Association. He states that, unlike the United States with a population of some 80,000,000, Australia has a population of about 3,000,000, and their danger lies in the excessive zeal of supply dealers, who, in their pertinacity to make small bee-keepers, will drive the large ones out of the industry to their own ultimate loss. He concludes by wishing our meeting to be productive of good to the industry.

I have also a reply from the bee-keepers of Tunis.

Their president expresses pleasure at the invitation, but states that they will be unable to send a representative.

The Irish bee-keepers promise a representative from St. Louis, who will attend, Dr. Charles D. S. Digges.

The Spanish bee-keepers, with headquarters at Barcelona, inform us that Mr. S. Castello has been appointed a representative to our convention.

Pres. Harris—You have heard the reading of the letters. I wish to say on this occasion that our vice-president has done all in his power to get foreign representation, and we should thank him for his efforts in that direction.

Mr. York moved that the letters of reply be placed on file, and a vote of thanks tendered to Mr. Dadant for his efforts to secure foreign representation.

Dr. Miller—From the reading of a number of foreign bee-journals I know that if it has done no other good, Mr. Dadant has succeeded in calling the attention of bee-keepers all over the world to this meeting, and quite extensive notices have been made in the foreign journals as the result of this work.

The motion was then put and carried unanimously, the members rising.

Mr. Dadant—I thank you for your vote of thanks. I am well repaid for the little trouble I have taken.

In the absence of a program, on account of the sickness of the secretary, Mr. Dadant moved that the rules of order be supended and a question-box be opened. Carried.

BEES THAT SEEM TO LOSE THEIR ENERGY.

Mr. Krebs (Texas)—My bees last year, and the bees of a friend of mine this year, seemed to cease all energy of every kind and would not keep a queen, rear one, or accept one, and would not even take care of the brood. If there is any remedy I would like to hear it.

Mr. Gill (Colo.)—Is it under artificial or natural swarming, or what?

Mr. Krebs—I manage them by division. The bees seem to have a dilatory disposition, starting with a full colony and simply dwindling down to nothing, and refuse every effort in every particular, whether divided or not divided, to accept a queen or rear one, or keep the one they already have, and kill off their old queen. Some have told me they thought it was caused by laying workers, but there were no eggs there, and consequently it could not be that. Others in the same neighborhood have had the same experience. As to handling, it does not matter. The other gentleman I spoke of did not handle them at all. With reference to the forage, almost anything that is raised in the United States we have.

Mr. DeLong—Does the gentleman suggest an individual colony, or a number of them?

Mr. Krebs—A number of colonies in both cases mentioned.

Dr. Miller—Do I understand that those men in the same neighborhood have their colonies go in the same way?

Mr. Krebs—Yes.

Dr. Miller—Those bees are so thoroughly disappointed because we did not go to San Antonio this year that they have lost their vigor! [Laughter.]

Mr. Krebs—I think that is one very good answer to the question; I hope you will all come down to see us.

Prof. Benton (Wash.)—In regard to that question, let me ask the time of year.

Mr. Krebs—It occurred mainly in the spring of the year, although it seemed to be on certain occasions, any time during the summer. But mainly in the spring of the year, from the commencement of swarming or until the middle of June.

Mr. Dadant—I would like to ask whether the bees are numbed in any way? Do they seem to have the disease of bee-paralysis?

Mr. Krebs—Sometimes they have paralysis, but in this case there does not seem to be anything the matter, only the dilatory disposition.

Mr. Hutchinson—I have had some trouble along this line, but it was during the honey-dearth. I have never had any trouble of that kind when the bees were gathering honey.

Prof. Benton—I hardly think the condition mentioned is due to disease, but rather more to certain other peculiar conditions. If you examine the bees at this time of the year in any part of the country from here eastward and southward, you will find that in a very heavy aster harvest they fail, and are a little weak for brood-rearing; they neglect the queen, and do not care whether they have a queen or not. They go queenless oftentimes when the queen is in the hive, yet they are getting honey rapidly, and they are in a normal condition, but they dwindle very rapidly if they have not been cared for in July and August, for the simple reason in much of the territory southeastward about here they get very little honey and rear very little brood, and the bees are June-reared. In this heavy aster harvest they drop off rapidly, and peculiar conditions arise. They go into winter quarters with a few old bees and come out poorly in the spring. That is merely the result of getting honey so rapidly late in the season. That is the reason I ask the question. I have had many a man tell me this aster honey was poisonous to the bees. But, on the other hand, examine a colony that has been well cared for in the summer, has had a young queen and bred up rapidly, and you find it strong in bees reared during July and August; they gather the aster honey in rapidly, and the combs at the opening of the aster harvest being filled with brood, are only gradually filled with honey in the interior of the hive, a good surplus is obtained, and they go into winter quarters in good shape. But, on the other hand, a colony without the combs being filled with brood, when the aster harvest opens, if made queenless, will have very little brood, and be very little inclined to accept a queen and gets in a very abnormal condition.

Dr. Miller—He says this is in the spring.

Prof. Benton—Similar conditions might occur then. This is particularly true of Kentucky, Tennessee, North Carolina, West Virginia, Maryland, and even extending, I believe, as far west as this.

Dr. Drunert (Mo.)—Since I have been working with bees, for 45 years, both in Europe and here, I never had but one inactive colony; that is, they did not work. A neighbor said it was the hive. We examined it, and there was a fine black queen in there and a very few bees, but the bees had not swarmed. I came to the conclusion that the queen was too old to breed, and the bees did not get rid of her to get another one.

Mr. Reinecke (Kan.)—I had a very strong colony; it was during the time when there was not much flow that they acted that way.

Dr. Bohrer (Kan.)—Do bees when refusing to accept a queen or rear one, continue to store honey and fill up the hives?

Mr. Krebs—It is not from careless breeding, nor is it from any late flow in the fall. It is after the flow commences in our neighborhood that the bees commence from some cause to refuse to do anything—do not work, do not gather honey, do not accept queens, do not attend to the brood, do not do anything but lie around and die.

Mr. Hyde (Tex.)—I believe the cause of the trouble is that the bees have gotten some kind of poison from some poisonous flower gathered from near the river; I think that is about the only answer to the question, unless we could examine the bees and know more exactly what the condition was.

Mr. Gill—I am satisfied the trouble is with the food, and very likely in the pollen.

HONEY AT BOARDING-HOUSES.

"Should bee-keepers stay at a boarding-house where they have no honey to eat?"

Mr. Calhoun (Mo.)—I would suggest that where they have not, we call their attention to it and thereby extend the sale of our honey.

Mr. Hagood (Tex.)—I believe the best plan would be to eat where they have no honey, and always make it a rule to call for it.

Dr. Bohrer—There is a better plan than that. I would recommend that we do as the young man did who went to see his girl, and when invited to take his seat at the table said he had brought a lunch with him. He didn't come there to sponge.

Mr. York—I think if the young man went to see his girl his "honey" was right there!

Mr. Tyler (Ill.)—I went to register at the hotel, and the first thing the girl said to me was, "Have you brought any honey along"?

Pres. Harris—Some of us have brought honey with us in the form of our wives and babies.

Mr. Andrews (Calif.)—I have often asked why they did not have honey on the table, and they have said the boarders will use just as much butter without the honey as with it.

Mr. Stewart (Mo.)—I spent two months and a half in one city trying to sell extracted honey to boarding-houses and hotels, and there was not one out of twenty-five that I could interest in honey. Why? It cost more than most of the things they buy. It is better than most of the things they buy. It costs them more to feed their people on honey than any other thing they bought. I believe that is the true reason. They will give you another reason, that the boarders do not like honey!

Mr. Reinecke—We found it very difficult to sell honey in our section; but we put it up in small quantities and got the people to start, and afterwards got them to take large quantities.

Mr. Niver (Ill.)—Right in line with this work in connection with the boarding-house and hotel-keeper who think it is too costly altogether, one gentleman suggests to me it is a lack of tact. Perhaps it is, but I had tact enough to convince them on a few occasions that it is really as economical as anything they can put on the table. They will buy cheap syrups, but honey being so very rich they take very little of it, and I really believe it is a very cheap and economical food. I am simply talking shop. I don't think the boarding-house keeper can be brought to a realizing sense of his iniquities at all; he is incorrigible.

Mr. Cary (Mo.)—Years ago I asked a hotel-keeper why he didn't have honey on the table, and he informed me that it was not put up in the same shape as other relishes; he said if it was put up in that shape it would be put on the table. We then had prepared at our expense a decanter of extracted honey, and that hotel to-day, at every meal, has these decanters on the table. They said, If we have to buy it in five-gallon cans or barrels it would be too expensive to place on the table and to keep away the flies from it. I think if we would adopt a suitable decanter, and place a suitable quality of honey therein, so that the restaurant or hotel-keeper can put it on the table, more of it would be found on our different hotel tables to-day.

Mr. Hyde—My wife has been stopping at a boarding-house in San Antonio, and as soon as they found a bee-keeper was stopping there the boarders began asking for honey, and the landlady "got onto it" and ordered a case of honey.

Dr. Miller—The question was whether bee-keepers should patronize a boarding-house that did not use honey, and we have gone to the germane question which is not perhaps strictly out of order, whatever influence we can have upon the public in general in getting them to use honey as an article of daily food will bear upon the boarding-house. I doubt very much whether anything will be gained by making an attack upon the boarding-houses themselves. A boarding-house will have butter upon the table, and if there were none there would be a row right straight, because people are in the habit of having butter upon the table at home and wherever they are. Our efforts should be made not upon the boarding-house but upon the public in general, and when you get everybody to want to have honey on the table every day there will be no trouble.

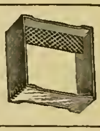
R. Secor (Ill.)—I am not only a bee-keeper but I sell groceries. I make the acquaintance of traveling men, and make it a point to say, "Boys, if there is no honey on the table ask for it". And they have invariably done so, and I would see the hotel people the next day and say, "Can't I sell you a case of honey"? And the hotel-keeper would say, "I don't care if you do. What is it worth"? I would say, "$3 a case, if you return the case in good order". In that way I keep honey in the hotels all the time in my locality.

Mr. York—I believe as Dr. Miller said, the way to get hotel-keepers and restaurant-keepers to have honey on the table is for us all to call for it.

Mr. Krebs—I find you can talk honey any place and any time you please, and people become very much interested. I think a good plan would be to get the people interested.

(Continued next week.)

Contributed Special Articles



Some Things I Have Learned in Bee-Keeping.

BY ADRIAN GETAZ.

FREQUENTLY the editors of our bee-papers request their readers to tell what they have learned by actual experience during the previous season. I do not remember ever having complied with the request until now, and to make amends for my carelessness I will go back some time.

A FALL HONEY-FLOW

The fall of 1902 was the only one of all my 19 years of bee-keeping in which there was a flow of nectar heavy enough to furnish a surplus worth speaking of. The weather was too cool to admit anything like working in sections. So if any surplus was to be taken it was to be in the form of extracted honey. But I had not the combs and supers necessary for that work. I have tried hives and frames of all shape and dimensions, and I have yet a half-dozen different kinds. All, however, have large brood-nests, the equivalent of from 10 to 13 Langstroth frames. At that time of the year the weather being cool, the brood-nest is more or less contracted. So I was able to extract one, two or three of the outside combs. In a few cases I repeated the operation, and the bees had yet time to refill their combs for the winter.

EXTRAORDINARY SWARMING.

All the readers of this paper know what extraordinary swarming occurred in 1903. In the Northern States it took place at the usual time of swarming. Here it was different. The usual swarming was over, and, not expecting any more, I had removed the queen-traps and ceased to take any precaution. All at once I found that several colonies were swarming unexpectedly. The causes of it are rather difficult to assign. The best I can see is that the weather having been cool for a week or so, the secretion of wax and comb-building in the sections had completely ceased. And when the weather turned warm, and a heavy honey-flow took place, swarming followed. And yet this explanation hardly seems sufficient to meet the case.

CAGING QUEENS.

I have several times stated that when a colony swarms destroy the queen and allow the colony to requeen out of its own cells. I think I have always added that while it is the best when only a small number of colonies swarm, it would be objectionable in several respects with a large number. I will not go over the ground again to explain why.

In that memorable June (1903), I found about one-third of my colonies with queen-cells more or less advanced, a few having swarmed already, out of which three swarms at least had gone to the woods. A wholesale killing of valuable queens did not exactly suit my notions, so I caged all that I caught. Where I failed to find the queen I destroyed the queen-cells. The caged queens were released a few days after all the brood was sealed. Of the colonies where the queen-cells had been destroyed, a few did not rebuild them, the majority requiring a second queen-cell destruction, and only in a few cases I finally had to replace the queen.

This is not in accordance with the usual course of events; but I think it can be explained. That swarming was, we may say, abnormal, or caused by exceptional circumstances. When these circumstances ceased, the swarming ceased also.

FINDING QUEENS.

After having written as much as I have on finding queens, given "quick and sure" methods to find them, it is rather humiliating to acknowledge that on that occasion I failed to find them in the majority of cases, at least with the hybrids.

The fact is, that when a colony has the swarming fever, queen, workers, and everybody else are in a state of excitement. And when the apiarist opens the hive, the first thing the queen does (that is, a black or hybrid queen) is to leave the combs and hide somewhere in the hive, or, I think, very often under it, or keep running in and out with the bees. In such a case, it is almost impossible to find her, and I prefer to give up the job for a few days. What I intended to do was to destroy the queen-cells and hunt up the queens three or four days later, after the excitement was abated. But on finding that some colonies had not rebuilt their queen-cells, I decided to carry out the experiment as described.

PLENTY OF DRONES.

Before going to Texas, Mr. Daniel Wurth, one of the leading queen-breeders, stopped a few days in Knoxville. Among other things, he told me that in order to have queens surely and promptly mated, there must be a plenty of drones in the apiary. But it must be "a plenty"—thousands of them. He has 75 drone-combs that he distributes in the best colonies of his different apiaries, keeps the colonies having these combs fed, if necessary, and thus secures plenty of drones sure enough. In this way the number of queens lost or mismated is insignificant, and, what is also very important to a queen-breeder, they are mated promptly.

It looks, at first, as if a few hundreds, or a couple of thousand, drones in an apiary ought to be enough to take proper care of all the queens that might be reared. But it does not seem to be so, according to Mr. Wurth. And my own experience more or less confirms his assertion. Like all the apiarists, I keep down the production of drones to a considerable extent, at least; yet I am satisfied that during the summer there are never less than 2000, or at least 1500, drones in each of my apiaries.

Yet I lose a certain percent of my queens, not very many, after all, but more than I like, if I could help it. It is usually admitted that the queens occasionally go into the wrong hive, and are killed, and that to avoid such events the hives should be as unlike as possible, so the returning queen can not make a mistake in identifying her home.

That theory does not apply in my case. I have hives of different shapes and forms; they are irregularly placed; there are plenty of trees, bushes, and clumps of weeds to add to the identification of the respective hives, so that any queen is able to return to the right place, unless she be as stupid as a goose, or worse.

I hardly think that the queens go in as recklessly as that. I know that they sometimes do go into other hives than their own. During the swarming season I keep queen-traps before all the hive-entrances, opening only those that have a virgin queen ready to mate. On a few occasions I have found a queen in a cluster of bees in front of a trap. Not a ball, but a cluster of bees taking care of the queen. In every case the colony in front of which was the queen was found queenless, and further examination has always shown that some colony which had a virgin queen ready to mate was minus its queen.

Nevertheless, I think such a case is rather a voluntary mistake. The two hives were usually far apart, and could not have been mistaken one for the other.

But another instance that I met with, some three or four years ago, leads me to think that the queens are not liable to enter recklessly the wrong hive. I saw a queen come and stop some 12 or 14 inches from the entrance of the hive. She hovered there only a few seconds. At the first hostile move of the guards, she was off.

So, like Mr. Wurth, I have come to the conclusion that the missing queens are lost chiefly outside, while going day after day in quest of a drone. But the puzzle still remains. Why such a large number of drones?

I think the only explanation that can be given is this: When the queens and drones come out of the hives they do not remain in the immediate vicinity, but fly at a distance at once. So if we want to insure a certain and prompt mating, we must have enough drones to fill up, so to speak, not only in the immediate vicinity of the apiary, but the whole neighborhood. And the proof of it is easily conceived, if we remember how few drones we notice around the hives, even where we know that there must be thousands reared in the apiary.

I might add also that during 1903 I lost an unusually large number of queens.

ROBBING ARTIFICIAL SWARMS.

When dividing for increase, the new colonies contain, usually, a certain number of combs put in with the adhering bees. During the following days a large portion of these bees return to their old place, and leave the new colony entirely too weak, especially when there is danger of robbing. To obviate this, it is a good plan to close the hive for a few days. By that time the bees get so attached to their new place, that few of them, if any, go back to the old home. A portion of the sealed brood has also hatched out during that time, and the new colony is then in shape to repel whatever robber-bees might come, that is, under ordinary circumstances.

A BAD CASE OF ROBBING.

Notwithstanding that precaution, one of my new colonies was robbed this summer. But this was exceptional. The robbing colony was, and is, yet very strong, and is "desperately wicked", and has given me trouble time and again the past summer. When I found that the robbing process was going on royally, I closed the new colony, robbers and home bees, all together. I put some wet grass before the robbers' hive to prevent them from doing damage elsewhere, and waited till the fourth day to re-open the new colony. Two days later robbing was going on worse than before. I followed the same method again, but this time I left the new colony closed for seven days, and the night I opened it I also shut the robbers in for three days, putting also a piece of camphor in one of the hives and some essence of some kind in the other, so as to give them entirely different scents. That settled it for good, as no further robbing has occurred since.

REARING QUEENS.

I use a queenless colony so as to be sure that the cells will be well cared for. I give them from time to time a comb of selected brood, cutting holes under the larvæ or eggs to make room for the cells. When the cells are matured I cage them, placing them in the center of the cluster so the young queens will be fed if they emerge before being taken out. I do not make any nucleus. I put the caged cells or virgin queens directly in the hives that they are to occupy.

This year I discovered that it was not necessary to cut the comb throughout, the only thing needed being to rake out a strip of cells down to the midrib, right under the larvæ or eggs of proper age. The base of the queen-cells thus constructed is, however, much weaker than when the comb is cut throughout.

PICKLED BROOD.

I had one case the past summer. When I discovered it there was but little brood affected yet. As I did not want to lose the sound brood entirely, I caged the queen, expecting to let all the sound brood hatch, and then disinfect the combs. Some way or other it was nearly four weeks when I visited the colony again. Then I found that the bees had cleaned the combs themselves so well that nothing more was needed. So I gave them a young queen and some brood. The disease has not reappeared.

SWARMS SETTLING ON A TREE FOR GOOD.

This year a few of my colonies swarmed sooner than I expected; in fact, much sooner than usual. One of the swarms settled on a tree during my obsence. The schoolboys passing by dislodged it, and it went to the top of another tree in an almost inaccessible position. There it remained several days. Finally, somebody undertook to steal it, or disturbed it in some way or other during my absence, so it left that place and clustered on the end of a high, long, and thin limb of a cedar-tree. The space being clear under the limb, I hoisted a bucket with some honey close to it.

The bees settled in and around the bucket. The honey bucket is away ahead of any shaking or raking arrangement, as it does not anger the bees, and always gets them, while shaking or raking a swarm very often results in making it take wing and leave for good.

This is the third time I have had a swarm, *with a queen*, remain hanging on some tree in the neighborhood. It seems that when a swarm fails to go away during the first, and perhaps the second day, the bees decide to remain in the neighborhood. The only explanation I can see is that when by some cause or other the cluster has moved somewhere else, the scouts sent out fail to find it when they return; and that the swarm, after waiting a certain length of time for the scouts to lead them away, concludes to make the best of the situation as it is. Knox Co., Tenn.

See **Langstroth Book Offer** on another page of this copy of the American Bee Journal.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Propolis as a Deodorizer and Perfume.

A foreign journal advises that all scrapings of propolis be saved. A piece as big as a hazelnut may be burned on a hot shovel to deodorize a sickroom. One can easily believe that the aromatic odor coming from the heated propolis will be more agreeable than the burning sugar so commonly used. It is also recommended to be put in linen-drawers to give a mildly pleasant perfume, Have any of the sisters ever tried it for this latter purpose?

Greater Use of Honey in Cooking.

It is probably time to urge again the importance of a greater use of honey in cooking. The sisters are the ones who have in hand the making of "sweeties." Not that the amount of honey used in the families of bee-keepers would be enough to make any great difference in the honey market—although every little helps—but such things are "catching", and if one woman makes honey-cakes, or honey-cookies, the recipe will be called for by a dozen others, especially if the product be good, which it may be.

Perhaps the one main reason why honey is not more largely used in place of sugar is because the sugar is cheaper. Some may be surprised to hear that in some cases honey is cheaper than sugar, but a little reasoning will make it seem not so surprising. It is a well established fact, although not so well known as it should be, that when honey is used the cake or cookies produced will keep much longer than if sugar be used—3 times, perhaps 10 times as long. Now when a batch of sweets is made, it is often desirable that they be kept for some little time, but when sugar is used the whole thing must be used up in a very short time or it becomes too dry and stale for use. On the contrary, if honey be used the freshness continues for weeks, or even months. So it may be cheaper to use honey at 3 prices, where it will last many times as long. The honey is more wholesome, too; especially where there is the least kidney trouble.

In almost any case—possibly in every case—honey may take the place of sugar in cookery, bearing in mind the liquid condition of the honey, and remembering that less liquid of any other sort must be used with the honey.

"Squares of Delight"—Honey-Cookies.

The following recipe is taken from the Delineator:

"Squares of Delight.—Boil two pounds of sugar and one pint of water together until a little dropped into cold water can be rolled into a brittle ball. Moisten 10 ounces of cornstarch with enough water from a pint to make a thin paste. Heat the remainder of the water to the boiling point, and add it, with a pound of powdered sugar, to the dissolved cornstarch and cook over the fire for 10 minutes after the paste is clear. Slowly pour it into the sugar syrup, add a ¼ pound of extracted honey and ¼ ounce of powdered tartaric acid. Flavor with rose or any fruit flavoring, and add ½ pound of chopped almonds. Return to the fire and cook until it will not adhere to the fingers when lightly touched. Cool in an oiled straight-sided pan, and when cold cut in squares with a sharp knife."

Here's still another recipe for honey-cookies that comes from across the water:

"One tablespoon extracted honey; one pint sour cream; one teaspoon soda; flavor, if desired; make a soft paste with flour."

Doesn't seem as if that would be very sweet; but some don't like things very sweet.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses. By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

A SWARM OF BEES AND RHYMES.

What a trying-to-patience fellow W. A. Pryal is! Assumes that my poetical box of starch and chunk of cheese must be small ones—too small for the purpose—and then scolds about his own assumption, and then—who would think it?—tries to sic me onto February! I'm not afraid of February; no true old bachelor is.

A swarm of bees in February
Is worth a new silk dress for Sarey.

A swarm of bees in March
Is worth a [100-lb.] box of starch.

An April swarm of bees
Is worth a [40-lb.] chunk of cheese.

A swarm of bees in May
Is worth a [half-ton] load of hay.

A swarm of bees in June
Is worth a [small-sized] silver spoon.

A swarm of bees in July
Ain't worth a fly. [i. e. Not so valuable as the silver one on Sarey's hat.]

But it's very painful for Pegasus to have to explain himself so. The Society for Preventing Cruelty to Animals will be after you, Mr. Pryal. Page 762.

EXCHANGING BEES WHEN INTRODUCING QUEENS.

So Mississippi has tried the new kink of substituting the attendant bees in the cage by some of the queen's future subjects—and they rudely grabbed hold of her. That's just the kind of things we want to be finding out. As Dr. Miller suggests, selected young bees would be much less liable to behave in that way. Whoever catches young bees doing so should make haste to inform us. Page 714.

CLIPPED QUEENS AND SWARMING.

That bees should carry a clipped queen at swarming-time and take her off for a quarter of a mile will strike some readers as enormously unreasonable and absurd. I, myself, hardly think they actually did it; but there is no absurdity about it. Nothing but lack of forethought and lack of drill keeps them from abolishing the clipping of queens altogether. No one would clip if they *always* carried off the clipped queens. To carry off a dead comrade and drop it at a distance is in regular line of duty. Sometimes one that isn't dead yet but kicking and resisting will also be carried off. A queen is somewhat heavier, to be sure, but then several could take hold at once if they did it just right. Kind o' runs in my mind that I have seen two fly together with a dead bee. For Mr. Gustave Gross to get his hat-brim within two feet of the entrance while watching for the queen, and for her to make a spring into the air, flapping best she could with stubs and legs, landing on the hat and remaining there—there's nothing even surprising about that. Page 716.

THE "BABY NUCLEUS".

Not probable, Mr. Pharr, that Hutchinson had any thought of putting down one and setting up another when he declined the first article about the baby nucleus. I do not exactly *wish* that all the articles on that subject had been declined; but if the editors all had chosen to "fight it out on that line" our craft had been better off, I ween. Presumably Hutchinson felt that way, too, but after awhile relented and let the thing appear. Page 718.

THAT SWISS BEE-HOUSE.

A bee-house for 360 colonies—bee-room and shop for keeper thrown in—is "going it" a little stronger than any one in this country seems to keep pace with. It was a Swiss, I believe, that said, "Make way for liberty". We will tolerate it in them if they say, "Make way for house bee-keeping". But after the way is all nicely made, most of us will let the other fellow walk in it. Page 725.

BEESWAX AS A PREVENTIVE OF DISCOLORING.

What about the claim on page 728, that beeswax in bits is a preservative of white woolens and silks when stored away? Without it they gradually get yellow; but with it they keep white. Should almost conjecture that "beeswax" there was a typographical error for something else. Chemical changes, or the ravages of microbes, or both, suggest themselves as the causes of this yellowing. Beeswax does not strike us as a chemical potent enough to diffuse effective influence inches away, or poisonous enough to hinder microscopic marauders. At any rate, if used for such a purpose it must be more thoroughly cleansed from traces of honey than some samples are, else it will daub things.

Ask Doctor Miller ??

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. MILLER, Marengo, Ill.

Late-Reared Queen Fails to Lay.

I have a colony of bees that was queenless two weeks. I tried to introduce a queen, and they would not accept her. I gave them some brood and they reared a queen, and she has been there three weeks and is not laying yet. I have to give them brood from other colonies to keep them up. How will it do to put it on top of another colony, and take it off next spring? Or, would you try to introduce another laying queen? FLORIDA.

ANSWER.—It is quite possible that their queen is all right and will do good work next spring. If the colony is strong enough to winter well, it may be worth while to leave them as they are, uniting in the spring if the queen does not turn out all right. It is often the case that a good queen does not lay in the fall, especially if no honey is yielding. If the colony is weak, consisting mostly of old bees, it may be best to unite now. It will be hardly advisable to put it over another colony unless you expect to unite it with that colony.

◆

Wiring Frames—T Supers—Storing in Sections—Queen Interrupted in Laying.

1. Is vertical wiring as good as horizontal? If not, why not?

2. Are T supers, used on shallow brood-chambers, as good as those with slats?

3. If bees don't like to store their honey above the 1 and 2 inches of honey, which is generally in the brood-combs (see Danzenbaker, "Facts About Bees"), how about their crossing a full super of sections to start an empty one above (Hershiser)?

4. Passing an old bottom-board at an out-yard I saw about a handful of bees clustering on its side, and by closer examination found a clipped queen amongst them. Now I remembered that I made an artificial swarm near it, about 10 weeks before, when I set the old hive on that bottom for a few seconds to move the new one on its place. Needless to say that that swarm was a failure, being queenless for some unaccountable reason. Now, I put that queen and bees into a queenless colony, and after one week she had about 10 square inches of brood. This was after all others quit breeding. Will this queen be as good as before the shaking? WISCONSIN.

ANSWERS.—1. That depends. If top and bottom bars are sufficiently rigid, vertical wiring is as good or better. With vertical wiring, the wire must be drawn tightly, and unless a bar of some kind is in the center to hold top and bottom apart, the bottom-bar will be curved upward, and if the top-bar be not pretty thick it will sag.

2. I think they are better; but all do not agree with me.

3. Without attempting to answer your question in all its reachings, I may say that bees are more prompt to store close to the brood than far away from it, other things being equal. I am not sure, however, that they will not be just as prompt to start storing within two or four inches of where they are already storing surplus as within two or four inches of the brood. I do not generally find one to two inches of honey in the upper part of the brood-combs of Langstroth depth. Often the brood touches the top-bar. I think observation will show that bees will begin work more promptly in an additional super when placed under, than when placed over, a super already occupied. The great effort on Mr. Hershiser's part is to get sections filled very full; this he accomplishes by limiting the number of supers, and by adding the empty super always on top, thus crowding the bees. He accomplishes his purpose; whether or not at too great expense is another story.

4. The probability is that she will be just as good a queen as if she had not been through such an unusual experience—possibly a shade better. Her work after other queens were no longer laying is some proof that she is a good queen. The life of a bee—whether worker or queen—depends a good deal upon the amount of work done. Having had a vacation, she ought to have more eggs left for future laying.

◆

Feeding Burnt Honey—Getting the Honey Out of Cappings.

1. I have a few gallons of very dark honey drained from cappings of white clover, probably burnt a little in rendering wax in the dripping-pan in the oven of the range. There is no water in it. Can I feed it in the spring?

2. I kept it in sealed fruit-cans last year. It smelt sour in the spring when I mixed it one-fifth honey and four-fifths sugar, and fed it last spring. In about 60 days I had a few colonies having paralysis. Do you think the honey helped to cause it?

3. Can I get the honey out of cappings in a German wax-press? MISSOURI.

ANSWERS.—1. Yes, when bees are flying daily in the spring you can feed anything the bees will take, unless it actually contains poison. The danger is in feeding stuff that will load the intestines at a time when there is no chance to empty them.

2. No, it is not likely that the feed had anything to do with the disease.

3. Cappings make the easiest kind of material to render wax from, and the steam wax-press will get the wax out of cappings or anything else from which wax can be got.

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Reports and Experiences

Methods of Wiring Frames.

I notice on page 771, under "Wiring Frames Growing in Favor", that J. B. Hall, one of Canada's foremost bee-keepers, is reported in the Canadian Bee Journal as saying:

"I kicked against wiring for 15 years, and 4 years ago I put in 600 wired frames, and was so pleased with them I put in 800 and last year 900."

Would you please ask Mr. Hall to give his method of wiring frames, and kindly publish it in the columns of the valued American Bee Journal? I wish to use only wired frames next year, for frames properly wired are more preferable. CHAS. WINKLER.

Adams Co., Nebr.

[Will Mr. Hall kindly comply with Mr. Winkler's request? We will be pleased to publish Mr. Hall's method of wiring frames, just as soon as we receive it.—EDITOR.]

Prevention of Swarming—Colony of Hustlers.

I started last spring with 30 colonies, and now have 32 in good condition. Not wanting any increase I tried to keep them from swarming, and partly succeeded. I put hives of empty combs or frames of foundation under each

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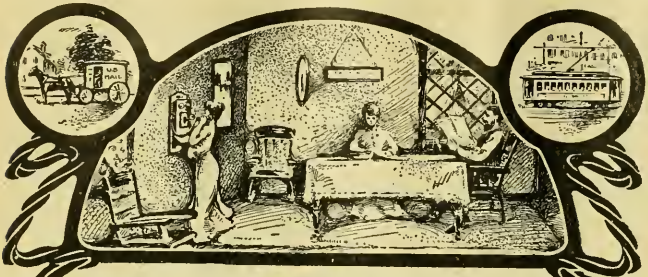
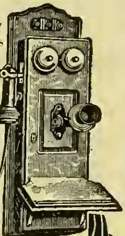
colony in the spring. Those I fixed early did not swarm, but others did. Those that swarmed I hived on full sheets of foundation, moved the old hive to a new location, put the swarm on the old stand, then in 3 or 4 days (or after the new swarm had got well at work in its new hive), I went through the old hive, cut out all queen-cells and put them back on top of the new swarm. This has worked first-rate with me this time, although I do not know as it would be the proper thing to do in all cases. At any rate I have gotten quite a good yield of honey, and my colonies are all strong at the beginning of winter.

I had about 1800 pounds of extracted and 750 pounds of comb honey, and would have had more extracted if I had gotten my extractor sooner. But it was between 2 and 3 weeks after I ordered





MODERN COUNTRY LIFE

The rural mail delivery, the telephone and the suburban electric railway are working wonderful changes in the life of the farmer's family today. The former isolation which drove many of the young men and women from the farm to the city, has been banished by the many telephone lines now in use all over this country.

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via the Nickel Plate Road, Dec. 24, 25, 26 and 31, 1904, and Jan. 1 and 2, 1905, good returning Jan. 4, 1905, at a fare and a third for the round trip, between Chicago and Buffalo. Three through express trains daily to Ft. Wayne, Findlay, Cleveland, Erie, Buffalo, New York, Boston, and all eastern points. Through pullman sleepers and excellent dining-car service, individual Club Meals, ranging in price from 35 cents to $1.00, being served in Nickel Plate dining-cars; also service a la carte. No excess fare charged on any train. Chicago depot, Van Buren and La Salle Sts. City ticket offices, 111 Adams Street, and Auditorium Annex. All information given upon application to John Y. Calahan, General Agent, 113 Adams St., room 298. 34—47A5t

it before it came, and all the hive-bodies were full, some colonies having 3 extra hives on top, and then they had to loaf and hang on the outside of the hives. I had one new colony that filled 72 4¼x4¼ sections and 8 full-sized frames, also partly filled 8 more besides their brood-chamber, and I did not have time to give them half the attention they should have had.

This is a part of my experience with the bees the past season. The rest consisted of some bee-stings and work enough to make me glad when night came.

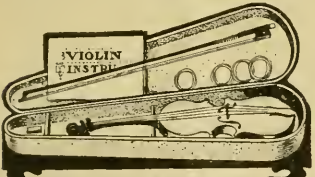
I would like to have the experience of others on their way of re-uniting colonies after they have swarmed.

Gage Co., Nebr. J. M. LINSCOTT.

Salnfoin—Yellow and White Sweet Clover.

Sainfoin clover is mentioned as a good honey-plant (page 740), and is a good one if the number of bees that gather on the very small patch of it in my garden indicates anything. It stood through last winter. Of course there was plenty of snow, but the thermometer was 25 degrees below zero and as low as 30 degrees below zero many times during the winter—and we are considerably north of Chicago, too. Sainfoin comes into bloom when the fruit-blossoms drop.

My few colonies came through the past severe winter all right. I have not lost a single colony in the last two years through the cold or stormy weather. I always see to it that the bees have plenty of the very best of honey to winter on, then pack them away in my big Draper-barn hives inside of dry goods packing-cases, with 4 or 5 inches of as dry sawdust as I can get, all around the top, sides and bottoms of the hives. Then I don't worry



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Tested	1.50	8.00	15.00	1.25	6.50	12.00
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JOHN M. DAVIS, Spring Hill, Tenn.
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We have a quantity of 60-pound tin cans (2 in a box) which we have lately emptied ourselves. and so know they are all right. In lots of 20 or more boxes (40 cans) we will sell them at 40c a box. Order at once as they will soon be gone. These are a bargain. Address,
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That covers the whole Apicultural Field more completely than any other published,
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any more about them till the next spring.

The honey-yield with me was not half as good this year as last, although there was plenty of white clover but not nearly the quantity of sweet clover we had last year. I think the weather here was decidedly too cold this summer.

My experience has been that large hives go with very strong colonies and a splendid yield of honey in a good season, and I get about 50 percent of swarms, spring count. I find the bees work very strongly on motherwort—fully as strongly as on catnip where motherwort can be found growing; it has quite a long season of bloom, too.

But best of all is the sweet clover, white and yellow, good for cattle and bees as well, at least our cows brouse it down when there is plenty of white clover 4 and 5 inches high about them. Sweet clover is one of the finest things in the world to keep steep embankments along railways from being washed out by rains, and will grow just anywhere.

I have been watching the very prolonged bloom of yellow sweet clover this year. I do not think it is at all natural that it should bloom much after the end of July, but I have seen it blossom as late as the white kind. It was caused by great, big, brown and black caterpillars skinning the seeds off the plants when they were filling out nicely, and of course the plants started into bloom again. This may not be the cause of all cases of prolonged bloom of this plant, but I notice the caterpillars seem to be the cause of it here.

I like the American Bee Journal very much indeed. I am always pleased to see the pictures of apiaries, as I can see what kind of hives others are using. If the size of frame, number of frames to hive, and size of hives were given it would be a great benefit to all concerned; also the honey-yield and number of swarms obtained each season, with description of the sources from which they procure their honey—say buckwheat, alsike clover, alfalfa, or any other plant that might abound in that vicinity which is of value as a honey-producer. W. D. HARRIS.

Ontario, Canada, Nov. 8.

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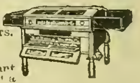
get strong and healthy—gain steadily in weight, are chicks hatched in Reliable Incubators.



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BEE-KEEPERS! Send me your orders for BEE-SUPPLIES for next year's use, and get the discount: Oct., 6 percent; Nov., 5 percent; Dec., 4 percent. The above discount does not apply to honey-packages. Send for catalog. W. J. MCCARTY, Emmetsburg, Iowa
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Fancy Comb Honey from White Clover,
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CONVENTION NOTICES.

Ohio.—The Southwestern Ohio and Hamilton County Bee-Keepers' Association will give its first of a series of lectures to be delivered this winter in this city, Friday, Dec. 2, 1904, at 7:30 p.m., in Greenwood's Hall, Ohio Mechanics' Institute. Messrs. Ernest R. Root and N. E. France will be our worthy guests. Mr. Root will introduce some new features with his new kinetoscope, the main pictures showing a swarm of bees running at breakneck speed from their hive, flying in the air, settling on a limb of a tree, sawed off by their owner, dumped in front of the entrance of a new hive and seen running in, and finally hived. This moving picture will be a treat to the public school teachers and children who are invited to attend the lecture. We expect to make this event the banner affair in beedom in this city for this season. The public in general as well as bee-keepers at large are all invited to participate. This Association is growing rapidly considering the time it has been organized. Mr. Root and Mr. France will meet a surprise party.

Cincinnati, Ohio. HENRY REDDERT, Sec.

Pennsylvania.—The Pennsylvania State Bee-Keepers' Association will hold its fall convention in Harrisburg, Tuesday and Wednesday, Dec. 6 and 7, 1904. An excellent program has been arranged. Many subjects of vital interest will be ably presented. General Manager N.E. France, of the National Bee-Keepers' Association, will be present, as well as other prominent bee-keepers. Every bee-keeper in Pennsylvania should interest himself in this meeting. D. L. WOODS, Sec.

Muncy, Pa.

Minnesota.—The Minnesota Bee-Keepers' Association will hold its next session in the First Unitarian Church, corner 8th St. and Mary Place, Minneapolis, Minn., on Wednesday and Thursday, Dec. 7 and 8, 1904, beginning at 9:30 a.m. on Wednesday. Among the subjects to be discussed and papers to be read are the following: "Some things I have learned about bee keeping," by H.V. Poore; How to increase your bee-pasturage," by Fred A. Krause; "Diseases of bees and legislation pertaining thereto," by Wm. McEwen: "Poultry as an adjunct to bee-keeping," by Victor D. Caneday; "Bee-keeping as an occupation," by J. H. Kimball; "Insuring bees," by C H. Harlan; "Late feeding," by A. D. Shepard: "Selling honey through grocers," by George W. York; "Size of hive relative to the honey flow," by Dr. L. D. Leonard; "A talk," by Ernest R. Root; "Honey exhibit at State Fair," by D.C. Hazelton; 'Queen-rearing and managing out-apiaries," by J. H. Siple.

On Wednesday evening there will be stereopticon lectures by Prof. F. L. Washburn, State Entomologist, 25 minutes, and Ernest R. Root the balance of the evening.

All are invited to attend this convention.

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OUR TOIL DOTH SWEETEN OTHERS

Honey and Beeswax

CHICAGO, Nov. 7.—There is not demand sufficient to take the receipts; hence are accumulating, off grades of the surrounding territory. Fancy white clover brings 14c; other No. 1 to fancy white, 12½@13c; off grades 1 and 2c less; amber, 10@12c. Extracted, white, 6½@7c; amber 6@7c; all of the foregoing is governed by quality, flavor and kind of package. Beeswax, 28@30c per pound. R. A. BURNETT & Co.

NEW YORK, Nov. 7.—Receipts are now plentiful of nearly all grades. The demand is not quite as brisk as last year, and only fair. We quote fancy white at 14@15c; No. 1 white, 13c; lower grades at from 10@12c; buckwheat, 9@11c, according to quality. There is fairly good demand for extracted honey at unchanged prices. Beeswax dull at from 28@29c.

HILDRETH & SEGELKEN.

PHILADELPHIA, Nov. 19.—Honey has been arriving freely, but for fancy grades, the demand has been equal to the supply. We would say the market is a little weaker, and quote: Fancy, 15@16c; No. 1, 13c; amber, 11@12c. Extracted, white, 7½c; amber, 6@7c. Beeswax, 26c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

CINCINNATI, Oct. 28.—There is a marked improvement in the demand for comb honey since our last quotations. No material change in the extracted-honey market. We continue to quote white clover extracted honey in barrels and cans at 7@8½ cents; amber in barrels, 5¼@6c. Fancy white clover comb honey, 14@15c. Beeswax, 28c. THE FRED W. MUTH CO.

BOSTON, Nov. 19.—Recent heavy arrivals together with very low quotations from some other markets have had a tendency to weaken our market. We quote fancy No. 1, 15@16c; No. 2, 14c, with ample stocks; absolutely no call for buckwheat. Extracted honey, 6@8c.

BLAKE, SCOTT & LEE.

ALBANY, N.Y., Nov. 9.—The crop of honey is turning out to be larger than estimated, and prices are softening, favoring the buyer. We quote fancy white, 15c; A No. 1, 14c: No. 1, 13c; mixed, 11@12c; buckwheat, best, 13c; average run, 11@12c. Extracted, buckwheat, 6c; white clover, 6½c; mixed, 6c. Beeswax, 29@30c.

H. R. WRIGHT.

KANSAS CITY, Sept. 22.—Market on comb honey is quite active at $2.75 per case for fancy white stock. Extracted rather slow at 6½@7c. We look for the demand on extracted to pick up considerably with cooler weather. Beeswax in good demand at 30c per pound.

C. C. CLEMONS & Co.

SAN FRANCISCO, Nov. 9.—White comb. 1-lb sections, 12@13 cents; amber, 9@11c. Extracted white, 6@6½ cents; light amber, 4½@5½c; amber, 3¾@4¼c; dark amber, 3@3½c. Beeswax good to choice, light, 29@30c; dark, 27@28c.

The German ship Altair, sailing the past week for London, carried 445 cases extracted honey. Movement on local account is not very brisk and is mainly in best qualities. Only for choice to select does the market show firmness.

CINCINNATI, O., Nov. 22.—Comb honey is now coming in more freely, and prices if anything have moderated a little. The sales made and prices obtained were for No. 1 fancy water-white comb, 13@15c; No. 2, 12@14c. Extracted is sold as follows: White clover, in barrels, 6½ cents; in cans. 7½@8c; amber, in barrels, 5¼@5½c; in cans, 6@6½c. Beeswax, 27c.

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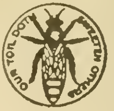
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FOR 1905

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THE A. I. ROOT COMPANY,

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Established in 1861

AMERICAN BEE JOURNAL

The Oldest Bee-Paper in America

Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

GEORGE W. YORK, Editor. CHICAGO, ILL., DEC. 8, 1904. Vol. XLIV—No. 49.

Editorial Notes and Comments

Annual Report of the National Association.

The annual report of the General Manager of the National Bee-Keepers' Association is to hand, and contains the following: Brief accounts of the different cases that have demanded attention during the past year; revised constitution of the Association; a financial statement from the General Manager; a list of members with numbers of colonies and crops; and the report of the St. Louis convention. There are perhaps more blanks than last year in the columns giving number of colonies and pounds of honey of members, and a hasty glance shows smaller crops this year than last on the part of those that do report. Quite possibly the poorer year accounts for the smaller number reporting.

A Centrifugal Wax-Extractor.

With the idea of improving on the German steam wax-press, the proprietors of Gleanings in Bee-Culture got up a centrifugal affair to throw out the wax while in the heated steam. It was to do much quicker work than the slow method of pressing. Actual trial, however, showed that the wax was not as fully gotten out as by the press, and all that has come of it is the record of failure.

What good then to take up room to mention it at all? It might be worth a good deal to you to know of the failure, if you should conceive the idea of trying it yourself. Moreover, there is no certainty that by some little change of *modus operandi* the thing may not yet be made a success. If more failures were recorded, fewer failures would be made.

"English as She is Spoke."

Our much-esteemed fellow-editor, E. R. Root, seems possessed of the idea, at least at times, that taking a word out of its usual form or meaning gives strength, if not elegance, to his diction. "Shook" is stronger than "shaken", and, by the same rule, a reserved seat at a lecture or concert would be more secure to the purchaser if marked "took" than if marked "taken".

One of his latest is "pawed". The contents of a wax-press, after being subjected to a certain amount of pressure, are to be relieved from the pressure, and the scalding mass "pawed over". Whether his "paws" have ever been injured by such a procedure he does not say. Lest the repetition of the word should become too monotonous, he introduces a change in the last number of Gleanings, and "claws" the hot stuff. No, you don't need hands furnished with claws—"a stick claws the contents over". Some might think that the material under consideration would be loosened up just as much if stirred with a stick as if clawed, but our editorial friend is such a royal good fellow that full permission is hereby granted him to say "paws" or "claws", or even "chaws".

Italian Bees and Foul Brood.

There has been considerable evidence, coming from Australia, Europe, and Great Britain, that Italian bees do not succumb to foul brood so readily as blacks.

Age of Bees for Wintering.

Arthur C. Miller writes as follows on this subject in the Bee-Keepers' Review:

> "In the average northern locality all colonies with good queens will rear young at a time suitable to furnish bees of the right age for good wintering. Often, however, through man's intervention, such breeding is prevented or interfered with, and when fall arrives man steps in and combines his colonies until they 'are strong enough for winter', quite forgetting the age-factor, which factor, by the way, can not be accurately determined unless it is positively known when brood emerged. Even if man knows the age of the bees in the colonies he is to unite, it is quite beyond his abilities to make such union in the same proportion of ages as those existing in a normal colony."

In the last sentence a point is touched upon that may deserve consideration. Much has been said as to having bees of proper age for successful wintering, and there is a pretty general agreement that young bees are desirable. A colony of bees upon going into winter quarters generally contains at least a few bees that will die of old age in early spring. If a colony were composed entirely of such bees, it would not live to see the following harvest. Neither would its span of life be increased if a number of such colonies were doubled up so as to make a bushel of bees.

Is it not just possible, however, that in the economy of Nature such bees have their use in wintering? May it not be that the strength of the younger bees is in some way conserved by the presence of old bees in the forepart of win ter? Some years ago Mr. Hosmer conceived the idea of wintering young bees only, destroying all the older bees, and quite an interest was awakened in the matter, but no one thinks of doing such a thing now.

What, then, shall we do to have the bees of well-proportioned ages? According to Mr. Miller, nothing, only to let them follow their own bent without interference; and in that he is probably right in general. A little issue, however, might be taken with him as to his position in the first sentence quoted; at least the question might be raised whether some "colonies with good queens", when left to themselves, do not in some seasons cease brood-rearing too early for best results. If a season comes when all gathering ceases much earlier than usual, can the bee-keeper not interfere to advantage by feeding enough to prolong the breeding?

Miscellaneous News Items

The Chicago-Northwestern Convention was held last Wednesday and Thursday here in Chicago. The attendance was excellent, and the interest was sustained throughout the five sessions, the last one closing at 4 p.m on Thursday.

Among the more widely known bee-keepers present were Dr. C. C. Miller, N. E. France, Ernest R. Root, W. Z. Hutchinson, C. P. Dadant, Emerson T. Abbott, Gus Dittmer, F. Wilcox, and Miss Emma Wilson. These, with over 100 others, made a pretty big buzz.

Those who were unable to attend missed a good meeting. The officers were all re-elected, as follows: President, George W. York; vice-president, Mrs. L. M. Stow; and secretary-treasurer, Herman F. Moore.

We expect to publish a full report of the proceedings as soon as possible. It will be some very valuable reading matter for our subscribers.

* * *

The Page & Lyon Mfg. Co.—The country between Marshfield and New London, Wis., was evidently at one time an unbroken woodland. Some years ago it must have been visited with a raging fire, which burned everything except thousands of blackened tree-trunks which look like so many lone memorial columns left to mark the once grand old forests. Various kinds of shrubs and plants have sprung up all over the previously wooded land, so that now, for miles on either side of the railroad, can be seen the charred remains of trees and the thick growth of brush and plants.

LUMBER SHED AND DRY-KILN.

We arrived at New London Junction (about a mile from Lew London) at 3 a.m. Friday, Oct. 21. We were the only passenger in the bus to the hotel, where we registered, and then went to bed for about three hours. After breakfast we looked up the Page & Lyon Mfg. Co. Entering their commodious offices, we first met Mr. A. C. Daugherty, the genial and courteous secretary of the firm. He greeted us most cordially, and at once started out to find Mr. G. A. Schultz, who has charge of the bee-supply department. We soon discovered him, and he at once began to show us over their great factory. They were closed down for rearrangement and large increase in capacity for turning out sections, hives, etc. Their improvements will cost about $4000, and when completed their section output can be 65,000 a day. The past season they turned out nearly 12,000,000 sections.

SASH HOUSE, BLACKSMITH SHOP, ETC.

Mr. Schultz takes a deep interest in his part of the work. Everything must be exact and all right. Their floor-space is so ample, and so wisely and conveniently arranged, that he could pick up the various parts of a hive in the dark, if it were necessary. The demand for their bee-supply goods the past season was such that they were compelled to decline a number of large orders. In about a week they expected to be running again, and then planned to stock up during the next few months so as to be able to take care of the trade, no matter what the size of the demand.

Mr. M. D. Keith, the president of the firm, has extensive interests in timber lands north of New London, so that they have quite an advantage when it comes to getting lumber. They also manufacture sash, moulding, flooring, siding, and, in fact, everything used in building the finest modern houses. Interior house-finish, like the bee-supply manufacturing, they make a specialty of. Such finish they make from all variety of wood, and from any pattern or design desired by their customers. Mr. Daugherty was also anxious to explain their facilities for turning out practically all kinds of the finest woodwork.

By the way, Mr. Daugherty is a man perhaps 60 years old. No, he's that many years *young*. He will never grow old, no matter how long he lives. He reminds one of Dr. C. C. Miller; he's mostly sunshine, and no doubt much of the success of the Page & Lyon Mfg. Co. is due to its happy secretary, Mr. Daugherty.

Unfortunately, Mr. Keith was not there when we called, so we missed seeing him. We were informed that he calls only occasionally, and then just to see that Mr. Daugherty and Mr. Schultz are attending to business! They are two such lively boys that they need watching, you know! Of course, Mr. Keith must be pleased with their efforts, for they do a rattling business in their New London mill and factory.

New London is beautifully situated on Wolf River. It has a population nearing 5000. It is a thriving little city, and seems destined to rival the largest and most enterprising cities in the State. It has numerous factories and business interests of large proportions. It is one of the healthiest places known, the death-rate being exceedingly low. There is surrounding it a very rich farming country, which always insures a prosperous and thrifty city. New London is all right. So is the Page & Lyon Mfg. Co.

* * *

The Illinois Bee-Keepers' Association, as will be remembered by many in this State, is an incorporated body. At the recent meeting held at Springfield, Messrs. J. Q. Smith, Aaron Coppin, and Jas. A. Stone were elected directors for the ensuing year.

Also, on motion, it was decided that the $1.00 annual membership fee should entitle to membership in the National Bee-Keepers' Association for one year.

The executive committee, composed of Pres. Smith, Sec. Stone, and Treas. Becker, was chosen as a legislative committee, with power to add to the same as needed.

Fifteen of the members present reported 26,200 pounds of comb honey, 10,400 pounds of extracted, and 1,007 colonies of bees, spring count. Some of the members present did not report. If the 15 members reporting are an average for the membership of the Illinois State Association, then the whole membership (120) would represent 80,056 colonies, and 292,800 pounds of honey for 1904. With this large amount what would be the total for all of the 35,000 bee-keepers said to be in this State?

* * *

Mr. E. Kretchmer, of the Kretchmer Mfg. Co., Red Oak, Iowa, has sent us a copy of a very nice booklet describing and illustrating the city of Red Oak. It shows enterprise on the part of the Red Oak Commercial Club, of which Mr. Kretchmer is the secretary. The booklet contains a picture of his fine residence, and also the following paragraph referring to Mr. K.'s firm:

> BEE-HIVES, WATER-TANKS, ETC.—The Kretchmer Manufacturing Co. has an extensive plant for the manufacture of bee-hives, bee-keepers' supplies, galvanized steel and wooden tanks, and other articles. The business was founded more than 30 years ago by Mr. E. Kretchmer, the manager, who has constantly extended his business until now his goods are shipped over a wide area of country, and from 20 to 60 men are employed the year around. Much of the special machinery required in the economical handling of the work has been made right in their own machine shops. The company was incorporated in 1900, and the prospects are that the output will be considerably increased in the future.

* * *

Mr. G. M. Doolittle, of New York State, so well known to bee-keepers everywhere, has been in very poor health the past three months, and now walks only in misery the most of the time, from a rheumatic hip and knee. We trust our good friend will soon recover from his affliction, and be as well and strong as ever.

Contributed Special Articles

Problem of Wintering Bees—Their Stores.

BY L. M. GULDEN.

Now that another winter is before us, it behooves bee-keepers to cast a retrospective glance toward previous winters, and to devise means of avoiding the pitfalls which every winter costs so dearly in bees. The heavy mortality during the past winter will brand it as notorious for a time to come, but it should teach a lesson in providing for wintering in the future, and, though the losses were severe, and the setback to beekeeping considerable, yet it should result in better wintered bees in the future, through the extra care which will be bestowed upon them.

The chief causes of the heavy mortality in cellared bees were: first, insufficient stores, and second, poor stores.

The first of these causes is encountered every winter, to some extent, but not to such a degree as the last winter, from the fact that the confinement was exceptionally long, thus necessitating more stores, which, unfortunately, had not been provided. With us, loss of bees through lack of stores has been one of the chief barriers to the building up of extensive bee-yards, and has resulted several times in setbacks from which it took several seasons to recover. In the future we will make assurance doubly sure by feeding up on good sugar syrup early in the fall, and in sufficient quantities so there can be no chance of a shortage before flowers bloom again. A flow sufficient for daily needs cannot here be depended upon before May 15, nor can a fall flow be depended upon in prairie districts, so sufficient food must be given early in September to suffice for about eight months.

The second cause of winter loss—stores poor in quality—bids fair to be of even greater moment than an insufficient quantity of stores. This is especially true of our yards, which are located in the timber. Here our flow from white clover usually opens the last part of June, and continues until about July 15, when it is supplemented by the basswood flow. This flow lasts here about ten days. The basswood honey is gathered only to a limited extent from the blossoms, by far the greater quantity coming from the secretion of the leaves, or, in other words, "basswood honey-dew."

It is this white honey-dew, together with the dark dew gathered later in the season, which causes such disastrous losses in our yards, located in the timbered region. The bees crowd this into the brood-chamber toward the last of the flow, and it is not practicable to extract it and feed good stores in time for winter. It is clear white and apparently nice honey, but when bees are wintered in the cellar it becomes watery, bursts the cappings, and the bees become swollen, daubed, and contract dysentery to such an extent that they sometimes entirely desert the hives, and, at best, come through the winter in a depleted condition, from which they hardly recover before the new harvest is on.

If anyone can throw more light on this phase of the wintering problem, and make some suggestions calculated to overcome the trouble, they will be gratefully received, and the object of writing this article will have been accomplished.

Douglas Co., Minn.

Bee-Stings as a Cure for Rheumatism.

BY A. F. FOOTE.

Apropos of the article, "Rheumatism Cured by Bee-Stings," on pages 660 and 661, I send a clipping from the Farm Journal on the subject, which explains itself, though the writer does not give the size of the dose, or whether it is to be taken inwardly or applied outwardly. He does say, however, that the bees must be well "shaken *after* taken."

It seems to me that the plan of this writer is much more simple than the one mentioned in the American Bee Journal though it is instant death to the bees, which would be preferable to a lingering death, which I think would be the result if deprived of their only means of defending their stores. I believe a bee loses its usefulness, as well as its life, when deprived of its stinger, no matter how "carefully removed;" at least I have never been fortunate enough to "run up against" a bee that did not have a stinger—except a drone, of course!

To the poor man who has suffered so much with bee stings (page 660) I will give my plan:

I remove the stinger—when I get it—just as soon as possible, by rubbing or scraping, never by pulling it out. Then, as soon as I am at liberty to do so, I go into my shop and apply strong vinegar to the part stung, from a bottle kept there for the purpose (I must own up that I got the above out of the American Bee Journal several years ago).

Formerly, a bee-sting caused a good deal of swelling, and much pain, sometimes for several days, but since pursuing the above method the pain has been of short duration, and the swelling not worth mentioning. I am inclined to think, though, that the manner of removing the stinger has more to do with it than the application of vinegar.

Mitchell Co., Iowa.

[The Farm Journal clipping referred to by Mr. Foote reads as follows:—EDITOR.]

BEE-STINGS AS A REMEDY.

There is an increasing demand for bee-stings among homeopaths. This is a new feature connected with bee culture, and it is hoped it will develop into a profitable business.

It was my privilege this season to supply a number of the largest druggists in New York with this product. The medicine is a combination of formic acid (or bee poison) and alcohol, and is called by the profession "tincture of virus." The pharmacist is generally a good mixer of medicines, but in this case prefers the bee culturist to be the chemist.

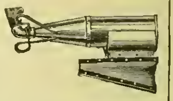
The solution is made in the following way: The bees are taken from the hive and put into a large bottle, which is filled about two-thirds full. The mouth of the bottle is then covered with a piece of cheese-cloth, to prevent the bees crawling out. It must be understood that the bees must be alive and exceedingly vigorous. The bottle is then severely shaken and the bees agitated, in order to make them extend their stings, on the ends of which are tiny drops of acid.

The alcohol is immediately poured over them, the bees are killed almost instantly, and the poison collected.

The bottle is then shipped to the druggist, who does the rest. After the solution is strained it is ready for use.

It is administered for inflammatory rheumatism, Bright's disease and kindred maladies. F. G. HERMAN.

Proceedings of Conventions



THE ST. LOUIS CONVENTION.

Report of the 35th Annual Convention, of the National Bee-Keepers' Association Held at St. Louis, Mo., Sept. 27-30, 1904.

[Continued on page 807.]

COMB-HONEY LIE DENIAL ON SECTIONS.

"Would it not be possible to have all manufacturers print on all sections a denial of the comb-honey lie?"

Dr Miller—I can answer that question. Yes. Another question however would come in, Do we want to? And another question would be, What will it cost? If you will tell us how much that will cost we will tell you whether we want to buy sections with that on or not.

Mr. Dadant—I believe it would be a good thing if we could place on our sections some remark concerning the purity of comb honey, but I doubt that all bee-keepers would want it, and it would be difficult for the manufacturer to make sections so that they could be sold right along with that printed on it. It seems to me it would be a great deal better for a label to be made to paste upon the sections. I believe a statement made without a signature, or simply bearing the approval of the National Association, to the effect that no comb honey is made artificially and sealed with a hot iron, as so many people believe, would do a great deal of good. I have had, as a foundation manufacturer, people come to see the manufacturing of honey and wondering why we didn't show them how it was put in and sealed over!

Mr. Kretchmer (Iowa)—Some bee-keepers would have it, and some would not on any consideration. I refer to something on the sections. It would be a hardship on the manufacturers and add to the expense of it. I think a label put on by those who should decide to have it would be preferable to having it printed on the sections themselves.

Mr. Rouse (Mo.)—The thought just occurs to me that I would not like to advertise such a thing as a fraud if the other fellow doesn't ask anything about it; but if he does, I believe that that little slip you speak of would be the thing to have. I don't believe it would be practicable to put it on all the sections. Some would not desire it at all.

Mr. Hart (Calif.)—I would like to ask, What is adulterated comb honey? Is it a grape-juice put into the combs? Is that considered as adulterated honey?

Mr. Dadant—I think the one who wrote the question meant to speak of the so-called manufactured comb honey, manufactured entirely from the comb to the honey, and sealed over artificially.

Mr. Hyde—It was suggested to me, and the idea was to have it thoroughly discussed, to see if we could not get at some way of refuting that statement. Nearly everybody believes that comb honey is manufactured. Almost the second question that people ask me is something about comb honey, if they ask about it at all; and they ask, How about the manufactured honey? And they then ask, Why is it you sell extracted instead of comb honey? I don't know whether it would be feasible to have it printed on the sections or not. It seems to me it would be possible to have that done in making the sections. I want to find out a satisfactory way to do it.

Pres. Harris here introduced Dr. Charles J. S. Digges, the representative of the Irish Bee-Keepers' Association to the convention.

Dr. Digges (St. Louis)—If I were to speak to you upon a subject I am more capable of speaking about than bees, it would be on cholera or smallpox, or something of that sort. I was afraid to allow myself to make any remarks extemporaneously with reference to bees, so I have just jotted down a few ideas on paper, and you will excuse me if I read the remarks I have to make.

Having been requested by the Irish Bee-Keepers' Association to act as its representative, it affords me great pleasure to meet you all in convention assembled. I had not the slightest idea such honor would have been given me, and I regret that a better representative, one thoroughly versed in the subject of bees, their minutiæ and detail, had not been selected.

A year or two since, through the medium of the Irish Bee Journal, I found that my brother in Ireland was greatly interested in the subject of the bee industry, and was editor of the journal of the association. I happened to see one morning in one of our daily papers something that to me seemed extraordinary; it was an account of the process of making comb foundation. The article was illustrated by an engraving, and thinking it might be a great help to the bees and allow them to work overtime I sent the paper to my aforementioned brother. I found however, that he knew all about it, and he mentioned several gentlemen in the United States who had either invented or improved on the thing.

To try to get even with him I told them of a patent way we have of making hens lay continuously, but he elaborated on that subject so well that I desisted from giving him any more pointers. I have recently in an hour or two learned more about bees than I ever knew before, by reading this little book, "The Irish Bee Guide," written by my brother previously mentioned as the editor of the Irish Bee Journal, and I am not surprised that you, gentlemen, take such an interest in the subject. This little book is the first and only one on the subject printed in Ireland, and I have great pleasure in presenting the President and the Secretary of the National Bee-Keepers' Association with copies of the work on behalf and with the best wishes of the author.

Receiving every month a copy of the Irish Bee Journal, I find that the bee-keepers there have been sorely afflicted with foul brood. At first, in my innocence, I thought foul brood was some dirty habit or other the little urchins had fallen into, but I find it is something like hog cholera, or lumpy jaw in cattle, and requires extermination. Through this affliction the bee-keepers in Ireland have suffered severely, and therefore felt unable to bear the expense of sending a representative such a distance at great cost, hence my appointment.

I will state that the bee-keepers in Ireland have not only the dread enemy of foul brood to contend against, but also a department of agriculture, which knowing nothing of bee-keeping, has refused all offers of assistance from the Irish Bee-Keepers' Association and appointing instructors in the counties who are as inefficient as the Department itself, are playing tricks with the interests of the industry. The Irish Bee-Keepers' Association is now obliged to introduce a bill in Parliament for the purpose of doing what it is the duty of the Department to do, viz., to combat the disease, which, through the apathy and ignorance of the Department has been allowed to spread through every county in Ireland.

The Irish Bee-Keepers' Association for more than a quarter of a century has been promoting bee-keeping in Ireland by lectures, publications, qualifying of experts, and by every other method available. They have co-operative societies of bee-keepers through the counties, affiliated with the Irish Bee-Keepers' Federation, which latter, with extensive premises in Dublin, supplies the hives and appliances at co-operative prices to the members and societies and also markets their honey and wax. The Department has worked steadily against every development of the kind, but the Irish Bee-Keepers' Association will persevere in hope that with a change of government the Department may get into better hands and the industry receive more recognition from the powers that will then be.

In such an evergreen country as Ireland, in fact in all Great Britain, where the fields are green and full of clover and other honey-bearing flowers, I may say all the year around, one would imagine the Government would leave no stone unturned to foster such an industry, whose possibilities are very great, and in this connection I will state that the value of honey imported into the United Kingdom in the month of July was $23,260, but alas, for the bee-keepers, that country does not enjoy a protective tariff or prohibitive, if you will.

In conclusion, gentlemen, I will state that the editor of the Irish Bee Journal, and author the "Irish Bee Guide," the Rev. J. G. Digges, my brother, sends to the brotherhood here his cordial greetings, and that but for the pressure of work connected with the interests of the craft in Ireland he had hoped to attend in person, and in behalf of the Irish Bee-Keepers' Association, I offer sincere thanks for your exceedingly kind invitation to be represented at this most distinguished assemblage, and pledge the assistance of the Old Country Association in any measure that may be advantageous. I also assure you that if any of the members of the National Bee-Keepers' Association find your way across "the pond" the Irish Bee-Keepers' Association will give you a Caed Mille Failthe, or in plain English a hundred thousand welcomes.

C. J. S. DIGGES.

Dr. Bohrer moved that the paper read by Dr. Digges be placed on file, to be incorporated in the proceedings, and that a vote of thanks be extended to the Irish Bee-Keepers' Association through their representative. [Carried.]

Dr. Digges—I am heartily pleased with the reception accorded to the Irish Bee-Keepers' Association through me. I merely reiterate what I previously said, that if any of you take a little trip and go over there you will see some bees, if the foul brood has not exterminated them.

On motion the convention adjourned until 2 o'clock p. m.

SECOND DAY—AFTERNOON SESSION.

At 2 p. m. Pres. Harris called the convention to order.

On motion of Mr. Pressler, H. H. Hyde was appointed sergeant-at-arms, and E. E. Coveyou as his assistant.

REWARD FOR PROOF OF MANUFACTURED COMB HONEY.

Mr. Van Dyne (N. J.) moved that this convention offer $1,000 for two sections of honey 4¼ by 4¼, adulterated or unadulterated, manufactured, filled and sealed over by human hands or machinery within one year from this date; and that we authorize and require every member of this convention to have this offer published in their county newspaper in each State represented here today.

Mr. Kretchmer (Iowa) moved an amendment that the publication shall be without cost to this Association. [Amendment accepted.]

Mr. Cary (Mo.)—I offer an amendment that in the publishing of the reward mention be made that the object of the reward is to convince the public that there is no such thing as manufactured comb honey.

Dr. Bohrer—I would suggest instead of saying "manufactured honey" we say "manufactured honey-combs."

Mr. Cary—I accept the correction.

Mr. Hershiser—What is the object of limiting it to 4¼ by 4¼?

Mr. Cary—It occurs to me some of these manufacturers might be making sections of other sizes.

E. T. Abbott (Mo.)—This seems to me a pretty serious thing, and I do not like the shape the resolution is in because it is suggestive, and it is an inducement to somebody to do it. I move that the entire matter be referred to a committee who shall report at a later time.

Mr. Dadant—I second the motion.

Mr. Vandyne—I hope this resolution will not be buried.

Mr. Dadant—I wish to say this is a serious matter. A number of prominent bee-keepers have asked us to bring this matter forward for discussion, and for us to vote on this question at present is too premature. The motion is all right, only we want to be careful how we word it, and what we say. That is why I second the motion to refer this to a committee until we can have a good discussion.

Dr. Miller—I have been at a good many meetings of the National Association and I never yet knew any matter to be buried in a committee, and I don't believe there will be any trickery of that kind. I am very sure, after reading, that some changes should be made in it. I certainly hope it may be referred to a competent committee, and time taken upon it.

Mr. Diebold—In my opinion the whole thing is out of order. I believe in letting the whole matter rest as it is.

Prof. Benton—Mr. Abbott brought forward one idea I should like to emphasize because it has occurred to me in the same fashion, time and time again. Whenever this has been brought forward it has been as a reward. We do not want that thing accomplished, therefore it should not be a reward, but a forfeit, distinctly, provided the thing can be done.

The motion to refer the matter to a committee, was carried, and the following appointed: Messrs. Pressler, Kretchmer, Gill and Abbott.

COMMITTEE ON NATIONAL LEGISLATION.

Mr. Hershiser—This is a pretty large country, and the bee-keeping interests are varied and occupy a good many portions of it. I therefore suggest that the personnel of this committee be distributed throughout the various sections of the country most interested in bee-keeping, and who would have the greatest interest in National legislation upon the subject.

Mr. Hyde moved that a committee of seven be appointed.

Mr. Dadant—I rather object to the number of seven; I have been on committees where the understanding had to be by correspondence, and when there are seven it is slow work. The less the better. Of course it takes at least three for a committee. Ordinary politeness requires we should hear from every member when there are seven, and seven are too many. I move we amend this motion to three.

Mr. Hyde—I accept the amendment, with the consent of my seconder.

A vote having been taken it was declared carried, and Pres. Harris appointed Messrs. Ferry (N. Y.), Marks (N. Y.), and Dadant (Ill.).

Pres. Harris—The reason I appoint these gentlemen is because they are near the seat of war, and I know Mr. Ferry, especially, will take things upon his shoulders and I know they will move.

Mr. Hershiser—There are a good many ideas that present themselves to a person, but I would like to make a suggestion for the consideration of the convention, and that is, that the President, General Manager and Secretary of the Association be ex-officio members of this committee, because their official position might push it along a good deal. I will make a motion to that effect.

Mr. Abbott—I second that.

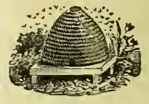
Mr. Hershiser put the motion which on a vote having been taken was declared carried.

NATIONAL PURE FOOD BILL—NEEDS OF BEE-KEEPING.

Mr. Abbott—I saw Dr. Wiley yesterday, and asked him about our National Pure Food Bill, and he said it would be up before the Senate for consideration some time, I think, about Dec. 6, and he says if it passes the Senate we are all right.

Mr. York moved that the Board of Directors be a committee to prepare an address, properly signed, and forward it to the President of the United States. [Motion carried.]

Our Bee-Keeping Sisters



Conducted by Emma M. Wilson, Marengo, Ill.

Origin of the "Honeymoon".

How many of the sisters have ever thought why a certain period after marriage was caller the "honeymoon?" Certainly it ought not to be because during only the short period from one change of moon to another were the newly wedded pair to be sweet as honey to each other.

The "honeymoon" is defined in the Standard dictionary as "the first month after marriage," and this explanation of the origin of the term is quoted from W. Pulleyn Etymological Compend, page 142:

"It was the custom of the higher order of the Teutones * * * to drink mead, or metheglin, a beverage made with honey, for thirty days after every wedding. From this * * * comes the expression 'To spend the honeymoon.'"

The T Supers—Cleaning T Tins.

One reason why we like the T super so well is because every thing pertaining to it is so easily cleaned ready for use again after a year's service. First, the supers after they are emptied are scraped free from propolis. For this part of the work a short-handled hatchet is used, and a very good tool for the purpose it is. After being scraped, the supers are piled in the shop ready for filling.

Next in order is the T tins. They are always cleaned with concentrated lye. A large iron kettle such as is used in hog-killing (and in years past in soap-making) is just the thing for cleaning the T tins, as then the work can be done out-of-doors and all the muss of cleaning up in the house is avoided. Of course if one is not fortunate enough to be able to secure such a kettle, some other vessel will do. I have used a wash-boiler, but it is not nearly so convenient. The kettle is hung over the fire, filled a little over half full of water, and let come to a boil. Then three cans of concentrated lye is slowly poured into the water a little at a time, as it makes the water boil so that there is danger of it boiling over if a great deal is added at one time. Perhaps less lye would do, but the stronger the solution the quicker it will do the work, and if several thousand T tins are to be cleaned it may be that more lye will be needed. Whenever the propolis is not quickly removed from the tins more lye is added, also more water as needed.

The T tins are put into the boiling solution as many at a time as will allow being moved up and down without being too crowded. A four-tined pitchfork is used to do this work. The object of moving them up and down is to allow the lye to reach all parts of the tins so that no particles of propolis remain.

If after putting in the T tins there is room for more water, the kettle is filled as full as convenient to work with.

If the lye is strong enough only a very few minutes will be required to remove all propolis. The T tins are lifted from the kettle with the fork and dropped into a tub of clear water to rinse. They are lifted from the rinsing water in the same way, and allowed to drain. They are as bright and clean as when new.

Now everything is clean but the separators, and we prefer to buy new ones, as they are not very expensive, rather than clean the old ones. So you see it is not a very hard job, or a very long one, either, to get every thing in spick-span shape for your next year's crop.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses. By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

LARGE YIELD AND LARGE INCREASE.

Dr. Archer's 890 pounds from one colony, and his season's increase from 1 colony to 36, are both of them remarkable results, well up toward the top of the heap. Page 734.

SPEED IN FLIGHT OF BEES.

Allen Latham gives us a good article on an unsolved problem, page 742. It naturally worries us a little that we cannot positively and exactly get a bee's speed in flight. What's the odds? Approximation in this case is somewhere nearly as good—quite good enough to keep us from believing in the wild and unreasonable speeds sometimes claimed. There are some other approximations besides those Mr. L. gives. We can compare their speed with the speed of flies. When you are out driving, and flies torment your horse, you can put him on his speed, if he is a lively one, and run away from them. But the deer-fly, brown, triangular looking fellow, cannot be run away from, not even by the deer. Got up for the purpose of keeping company with the deer and taking toll out of his blood. We may rudely guess the speed of deer-flies at 60 miles per hour, and other lively species at 30 miles. Then we can debate ad libitum whether the bee is a little swifter or a little slower than ordinary flies. I should incline to say a little slower. Quite likely flies, never having had any practice on long, straight lines, drop behind by whirling about and getting confused, when they might keep up if they used their speed wisely. Then there's the speed of the queen—pretty clearly illustrated when a swarm runs away to the woods—faster than a man can pursue on foot, but not beyond the speed of a man on horseback. How much faster can a worker fly than a queen? The workers fly up, over, and down, marking a course somewhat similar to that moved by a spot on the rim of a wagon-wheel. If the swarm progresses 15 miles per hour the individual workers move say three times as long a path, or 45 miles per hour. In this case they may be capable of considerably more speed than they are using—only the queen doing her best. Bee-hunters often time the bees they are feeding to find their tree. I have forgotten the exact figures, but they are moderate. The time they get is time on a double course, light one way and loaded the other, and with an unknown period of waiting in the middle. The waiting period can be eliminated by comparing the time taken when a quarter mile from the tree with that noted when a half mile distant. There still remains the problem of the difference between work-a-day speed and utmost speed.

Mr. Latham's observation that bee-work lags when wind gets up to 20 miles an hour, and ceases at about 30 miles is valuable. But for one thing we might almost say "enough said." The man who wants to be on the other side can claim that a gale of wind always stops the nectar-secretion. Time taken in loading from thin honey, 40 seconds. Thanks. I had forgotten, if indeed I ever timed it.

MELTED-WAX COMB-FOUNDATION PRESS.

And so Adrian Getaz thinks it worth while to make a serious effort once more for the melted-wax foundation press. I wonder myself at the utter lack of call for a utensil so popular in Europe. One of the considerations he gives, the enormous cost of getting small packages over some southern railroads, ought to make desirable any cheap, handy way to make one's own foundation.

Valuable inventions. Have room and press both very warm, and take out the sheet as soon as possible, and the foundation *will not be brittle.* Brittleness caused by a myriad little cracks from cooling while held fast. Set the press at a sharp incline, so all surplus wax will run off quickly, and you can get sheets thin enough for sections. I should have predicted failure for the latter invention; but as he finds it to succeed I willingly submit.

HONEY IN COOKING AT FAIRS.

It's sad, Mr. Acklin. Takes a big lot of honey-sweetened pies to win first prize at a State Fair; and then the judges and supernumeraries and too-handy friends eat 'em all up—so the cost mounts up to more than the premium. Pshaw! That's not the spirit that conduces to a first-rate Fair. Such an honor should be held far more than the cost of a few pies. But it's a bright and winning idea that the great community of womankind feel rather languidly interested in honey pure and simple, but sharpen up greatly when cooking and canning and pickling are hitched on. Page 744.

Ask Doctor Miller ??

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. MILLER, Marengo, Ill.

Transferring Bees—Using Hives Where Moths Have Been.

1. I have two colonies of bees in boxes, and would like to put them into hives. When is the best time, and what is the best way?

2. Can I use a hive that has had moths in it? IOWA.

ANSWERS.—1. Leave them as they are at present, and don't think of transferring till fruit-bloom next year. Indeed it will be better to wait till 21 days after the bees swarm. You will find in your bee-book instructions for transferring, and if you haven't one, by all means get one right away and study it pretty thoroughly during the winter months. It will pay you to do so—big. This department is intended to supplement the books of instruction, and after you have studied one or more of them thoroughly you will find many a question arising that is not fully answered in the books, and such questions will be cheerfully answered here.

2. Yes, the hive is all right, and the combs can also be used unless torn so badly by the worms that scarcely anything is left of them. You will be surprised how quickly a strong colony will clean up combs infested by wax-worms, although it will be wise to dig out with a wire-nail the large worms.

◆

Running for Increase of Bees and Surplus Honey—Italianizing.

I am a reader of The American Bee Journal, and enjoy it very much. I have 80 colonies of bees in 8-frame dovetailed hives, all in healthy condition. Next year I would like to run an out-apiary of 25 of the 80 colonies, and keep the rest at home, as I will have plenty of time to attend to them. I would like to increase the out-apiary 25, giving me 50 colonies there in the fall.

1. What would be the best way to manage the 25 colonies to get the increase, and secure a good crop of comb honey? I could not stay there and take care of them when I would have to work in my home apiary.

2. If you would divide or shake them, how would you do it?

3. Would it be satisfactory to use the queen-trap in the home apiary, and let the new swarm issue, carrying the old hive to a new place? Then set the new hive on the old stand and let the swarm return to the new hive, releasing the queen and leaving her with the swarm in the new hive, and placing the super from the old colony on the new?

4. Would not this method prevent afterswarms and mixed swarms?

5. I have 6 colonies of full-blooded Italian bees, and the rest are black bees. What would be the best way to get the blacks Italianized? WISCONSIN.

ANSWERS—1 and 2. The supposition, of course, is that you would be able to go to the out-apiary to make needed visits, although not to be there each day. Very likely the plan of shaking swarms, one from each colony, would suit you as well as any. When the time comes that you think the bees will begin to consider the matter of sending out swarms, look in perhaps three or four of the colonies that appear the strongest. If you find no queen-cells containing eggs or larvæ, wait a week or 10 days, and try again. When you find queen-cells occupied, you may shake each colony, leaving the shaken colony on the old stand, and putting the brood on a new stand with bees enough so the brood will not be chilled. Each of the "stump" colonies thus left may be allowed to rear a queen of its own, but it will be much better to give them some aid in this direction. Queens may be bought and introduced, or you may rear queens in nuclei and have them ready. The most convenient way will probably be to give each one a ripe queen-cell. You may manage it in this way: A few of the strongest colonies will make preparations for swarming before the others; and these you will shake, allowing them to complete their cells. Before the oldest of the young queens has a chance to destroy all the other cells, cut out the cells and give to the other colonies that you will now shake, putting the cells in cell-protectors or cages.

3. All right except that if you put the super on the swarm at once, there is danger that the queen may go up into it. Either put a queen-excluder under the super for a few days, or don't give the super for two or three days, till the bees get the brood-nest started to hold the queen.

4. There will be less likelihood of afterswarms than if you put the swarm in a new place, leaving the old hive on the old stand, but you can do still better at preventing afterswarms. Put the swarm on the old stand, and put the

"stump" or mother colony close beside it. A week later, remove the mother colony to a new place. The plan will allow some possibility of mixed swarms, for occasionally a swarm instead of returning to its own hive will return to another hive where there is commotion from a returning swarm.

5. Perhaps there is no better way than to rear Italian queens from your full-bloods, but it may be less trouble for you to do another way. See that your Italian colonies are strongest, so as to have them swarm first, giving them brood, if necessary, from the black colonies, to strengthen them. When an Italian colony swarms, put the swarm on the old stand, and set the old hive in place of one of your strongest black colonies, setting the black colony in a new place. The field-bees from the black colony will join the Italian, which, thus reinforced, will send out a good swarm 8 or 10 days later. Proceed with this swarm just as you did before, and put the old hive in place of another black colony. Repeat the process as long as swarms are sent out. That will give you a number of colonies with Italian queens, and when the swarming is over you can introduce Italian queens in place of the black queens that are left.

Does Rotten Brood Develop Into Foul Brood?

1. After a very successful season in 1903 I closed in the fall with 30 strong colonies. About 10 colonies died last winter, in all probability from the severe cold. It was a late spring here, so very few swarms came out, and in our haste to use the old combs we divided several of the strong colonies and introduced new queens, using five or six old combs to a hive. None of our divided new colonies did well. The bees would not work on the old combs at all, and we are wondering if it is a case of foul brood. There is no odor to speak of about the combs. If it is foul brood would it not have spread through our entire apiary this summer? The strong colonies that we did not interfere with did well the past summer. I picked some of the cells open with a toothpick and in one case it seemed to string out a little.

2. The question seems to be, does rotten brood develop into foul brood, under any circumstances? Illinois.

Answers.—1. The fact that the bees did not work on the old combs does not prove that there was any foul brood present. Give a foul-broody comb to a strong, healthy colony, and it will use it, although it will become diseased thereby. Neither would it necessarily spread through the entire apiary. It might, and it might not, depending somewhat upon the season and the strength of the different colonies. If the season was good and the infected colonies fairly strong, there might be no robbing; and it is through robbing chiefly that the disease spreads.

The fact that the artificially-made colonies did not do as well as the others is no proof of itself that foul brood was present. It is easily possible that they did not have as fair a show, and were too weak to do well.

The only bad symptom in the case is that stringing out of the brood. That looks bad—very bad—although it is not a certainty that your bees have foul brood. There is nothing to do now; the thing to do is to be sharply on the lookout next year. In the meantime it will pay you well to inform yourself thoroughly about the infectious diseases of bees. Get Dr. Howard's pamphlet on foul brood, and study up all you can find on the subject in back numbers of the bee-papers.

2. Foul brood is caused by the growth of a microscopical plant, bacillus alvei, and your bees can no more have foul brood without this plant or its seeds (spores), than you can have a field of corn without having the seed of corn first put in the ground. Chilled brood may to some extent favor the growth of the microbe, but chilled brood alone can not start the disease.

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Reports and Experiences

Late Pollen-Gathering.

On Nov. 20 I saw my bees bringing in pollen from dandelion bloom. Who can beat that for Iowa? Bees did no good in Iowa, or, rather, Cedar County the past season. N. Staininger.

Cedar Co., Iowa, Nov. 22.

No Surplus Fall Honey.

There is no surplus fall honey of any account this year. My bees are in good shape for winter, all packed on the summer stands. Young bees were flying last week. I hope they will winter well. I never lose any except by smothering or queenlessness.

D. C. McLeod.

Christian Co., Ill., Nov. 28.

Temperature for Bottling Honey.

There was a great deal said at the St. Louis convention about putting up extracted honey, some seeming to think 125 degrees about right. I experimented some last year, and my honey put up at 125 degrees candied in the winter, while honey put up at 150 degrees kept perfectly. I have 1000 pounds now, put up last June, as clear

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as when put up. I am selling all the time. I have not found one jar candied. I heat it in the jars with water around it and under it, sealing it hot. The water should come to the necks of the jars, but don't let the water boil around the jars; as soon as it begins to move around the jars, take them out. If the water does not come to the necks of the jars you will have a poor job—bottom too hot and top not hot enough. Of course, 125 degrees for several days or weeks is better. IRVING LONG.

Linn Co., Mo.

Election of National Directors.

I see in the American Bee Journal of July 24 that its columns are open to the discussion of the election of directors of the National Bee-Keepers' Association. What I would recommend as the best plan would necessitate a change in the Constitution, Art. IV, Sec. 1. Instead of a board of 12, let us have a man from every State, or where the States are small, and but

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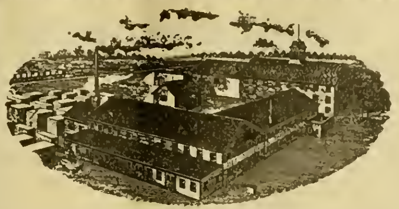

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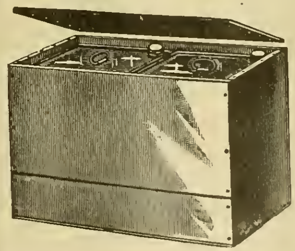

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few members in them, group two or three States together, and let the members select a man for director, for they are better able to judge as to fitness of the man in their midst than are any others.

What do I know of a man's qualifications in New York, who has never held an office in the Association? Comparatively nothing. But I do know the bee-keepers of Texas, and could cast an intelligent vote in my own State.

For instant, every State association could select (in some way) at its annual meetings the man its members thought best fitted to fill the place. This would bring about a more equal distribution over the country of the board of directors, and that would enable them to attend to any business that might be necessary with less cost to the Association; and that would "cut out" all wire-pulling across the State lines. We could stand a little wire-pulling in the State, as we would have some chance of getting hold of the other end of the wire; but when they go to pulling up in Canada (if they should) there is not much chance for us Texans to "catch on".

Now, if the rest of the members don't see this as I do, I hope they may be able to present something better.

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Winter Stores for Bees.

Scores are asking how much honey or sugar stores their bees will require during winter. While this question is answered in all the text-books, it may be well to state here that we figure on from 10 to 15 pounds indoors, and from 15 to 20 outdoors. An ordinary comb, when filled full of sealed stores weighs anywhere from 4 to 5 pounds. By glancing over the combs one can, therefore, estimate according to their filling about the amount of stores he has; then feed if necessary.—Gleanings in Bee-Culture.

Differing Tempers of Bees.

Dr. Miller, in Gleanings, queries as to whether there may not be a difference as to the crossness of bees in different years. Probably every experienced bee-keeper has observed that different days produce different influences upon the mood of the bee, notwithstanding the existence of similar

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Remember, if you want both the American Bee Journal and the American Farmer for 1905, send us $1.00 before Dec. 31, 1904.

Those who are in arrears on their Bee Journal subscription, and desire to take advantage of our liberal American Farmer offer, will need to pay all that would be due on their subscription to the end of this month (December) and also $1.00 for 1905.

Those who are now paid in advance extending into 1905, can send us $1.00 for another year, and also have the American Farmer for one year. Address all orders to

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conditions in so far as relates to natural food supply, etc. If such contrary influences are exerted without apparent cause during two successive days, it is not improbable that certain years may be, more largely than others, made up of days in which this evil influence predominates. Environments influence humanity very perceptibly. Why not the bee?—American Bee-Keeper.

Yellow Jacket Sting Compared with Bee-Sting.

I notice with interest Stenog's reference to what Mr. Wathelet, editor of Le Rucher Belge, says about the sting of the honey-bee. His is identical with a recent experience of my own, although the sting I received was from a yellow jacket, smaller than the bee, and it lasted several days. While the part did not become swollen, there was a painful itching sensation for more than a week; but had it been the sting of a bee, an entirely different sensation would have been produced, which would have disappeared in five to ten minutes. I found the wasp-nest, broke it up, and secured the queen, the remains of whose royal highness I have kept. I feel confident that the poison is quite different from that of the honey-bee, and more virulent.—WM. M. WHITNEY, in Gleanings in Bee-Culture.

Unitah Reservation and Bees.

The opening of the Unitah Indian reservation is of special interest to the bee-keepers of the West, since it will open up a large tract of irrigated territory that will make the finest kind of bee-range. The last Indian appropriation bill provided for the opening. The original bill fixed Oct. 1, 1904, as the date of the opening; but because of the amount of work to be done in making surveys and allotting lands, the opening was postponed by act of Congress until March 10, 1905.

The Unitah reservation lies in the northeastern part of Utah, in Unitah and Wasatch Counties. In area it comprises 2,334,000 acres of mountain and valley. In altitude the reservation ranges from 4000 feet in the lower valleys to 13,000 feet on the summit of the

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loftiest peaks of the Unitah range, the highest in the State. There are several fine streams of water which rise in this range, traversing the lower valleys and finally emptying into Green River. All of these streams can be easily diverted for the purpose of irrigation, making this one of the best-watered sections of the State. After making allotments to the Indians, the remainder will be open to entry under homestead provisions, each man being allowed 160 acres. There will undoubtedly be a great rush for this land, and it is probable that all applicants will be registered, and the land apportioned by lot, as was the case with the Rosebud reservation recently opened up.—J. A. Green, in Gleanings in Bee-Culture.

Neatness in the Apiary.

Neatness in the apiary is something to which I have several times referred, but as I go about inspecting apiaries I become so sickened by the sovenliness that I see that I *must* say a few more words. Time and again do I find men keeping bees who really have *no business* to keep them. Their hives sit askew, with the grass grown up around them. No foundation is used, and the combs are sure to be bulged and built crosswise. If the owner is asked about his bees, he is sure to answer, "I don't know. I don't pay much attention to them". How I *do* hate to find foul brood in such an apiary. It means that some one else than the owner must treat it.

But this is not the only class of bee-keepers who are neglectful of the appearance of their apiaries. I find even readers of the Review keeping bees in a way that makes my fingers itch to take hold of things and straighten them up. I don't expect that every man, who is making his living out of bee-keeping, is going to keep his apiary looking like a city park, although there is occasionally one that does. I notice, however, that the men who keep their apiaries looking the neatest are among the most prosperous. Neatness in the apiary may not be responsible for the prosperity; I suspect that the man who is thorough going enough to keep his apiary neat and clean is also thorough going in other respects. One of the most offending defects in the appearance of many apiaries is the disorderly manner in which the hives are set down; it could scarcely be said arranged, as there is really no arrangement about it. It is not necessary that the hives be set in long rows; in fact, there are other quite handy and pleasing arrangements, but let there be some sort of regularity about it.

After the hives are neatly arranged, the next step is to keep down the grass. So far as appearance is concerned, nothing equals the work of a lawn-mower, but it is considerable work in the forepart of the season in a large apiary. The next best thing to a lawn-mower are a few sheep. I have seen an apiary kept in fair condition where cows had access to it, but the sheep are preferable for several reasons. If I were running several out-apiaries, and felt that I could not afford to keep them mowed, and it was not practical to pasture them, I would scatter salt freely around each hive, at least one or two feet in front. This will kill the grass and keep it from growing. If there is anything in an apiary that distresses me it is to see bees struggling in and out of a hive the front of which is covered with a great mass of grass or weeds.

Get your hives into some regular order, set them level, keep down the grass, and, having gone thus far, I feel that you will abandon the habit of scattering about, and leaving lying in the yard such things as extra covers, frames, honey-boards, etc.

Where most of the time from daylight till dark is passed in one place, it is worth while to make that spot pleasant and agreeable—yes, even beautiful.—Bee-Keepers' Review.

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Honey and Beeswax

Chicago, Nov. 7.—There is not demand sufficient to take the receipts; hence are accumulating, off grades of the surrounding territory. Fancy white clover brings 14c; other No. 1 to fancy white, 12½@13c; off grades 1 and 2c less; amber, 10@12c. Extracted, white, 6½@7c; amber 6@7c; all of the foregoing is governed by quality, flavor and kind of package. Beeswax, 28@30c per pound. R. A. Burnett & Co.

New York, Nov. 7.—Receipts are now plentiful of nearly all grades. The demand is not quite as brisk as last year, and only fair. We quote fancy white at 14@15c; No. 1 white, 13c; lower grades at from 10@12c; buckwheat, 9@11c, according to quality. There is fairly good demand for extracted honey at unchanged prices. Beeswax dull at from 28@29c.
Hildreth & Segelken.

Philadelphia, Nov. 19.—Honey has been arriving freely, but for fancy grades, the demand has been equal to the supply. We would say the market is a little weaker, and quote: Fancy, 15@16c; No. 1, 13c; amber, 11@12c. Extracted, white, 7½c; amber, 6@7c. Beeswax, 26c.
We are producers of honey and do not handle on commission. Wm. A. Selser.

Boston, Nov. 19.—Recent heavy arrivals together with very low quotations from some other markets have had a tendency to weaken our market. We quote fancy No. 1, 15@16c; No. 2, 14c, with ample stocks; absolutely no call for buckwheat. Extracted honey, 6@8c.
Blake, Scott & Lee.

Cincinnati, Oct. 25.—There is a marked improvement in the demand for comb honey since our last quotations. No material change in the extracted-honey market. We continue to quote white clover extracted honey in barrels and cans at 7@8½ cents; amber in barrels, 5¼@6c. Fancy white clover comb honey, 14@15c. Beeswax, 28c. The Fred W. Muth Co.

Albany, N.Y., Nov. 9.—The crop of honey is turning out to be larger than estimated, and prices are softening, favoring the buyer. We quote fancy white, 15c; A No. 1, 14c; No. 1, 13c; mixed, 11@12c; buckwheat, best, 13c; average run, 11@12c. Extracted, buckwheat, 6c; white clover, 6½c; mixed, 6c. Beeswax, 29@30c.
H. R. Wright.

Kansas City, Sept. 22.—Market on comb honey is quite active at $2.75 per case for fancy white stock. Extracted rather slow at 6½@7c. We look for the demand on extracted to pick up considerably with cooler weather. Beeswax in good demand at 30c per pound.
C. C. Clemons & Co.

Cincinnati, O., Nov. 22.—Comb honey is now coming in more freely, and prices if anything have moderated a little. The sales made and prices obtained were for No. 1 fancy water-white comb, 13@15c; No. 2, 12@14c. Extracted is sold as follows: White clover, in barrels, 6½ cents; in cans, 7½@8c; amber, in barrels, 5¼@5½c; in cans, 6@6½c. Beeswax, 27c.
C. H. W. Weber

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FACTORY OF THE MARSHFIELD MFG. CO.—(See page 836)

Root's Catalog for 1905

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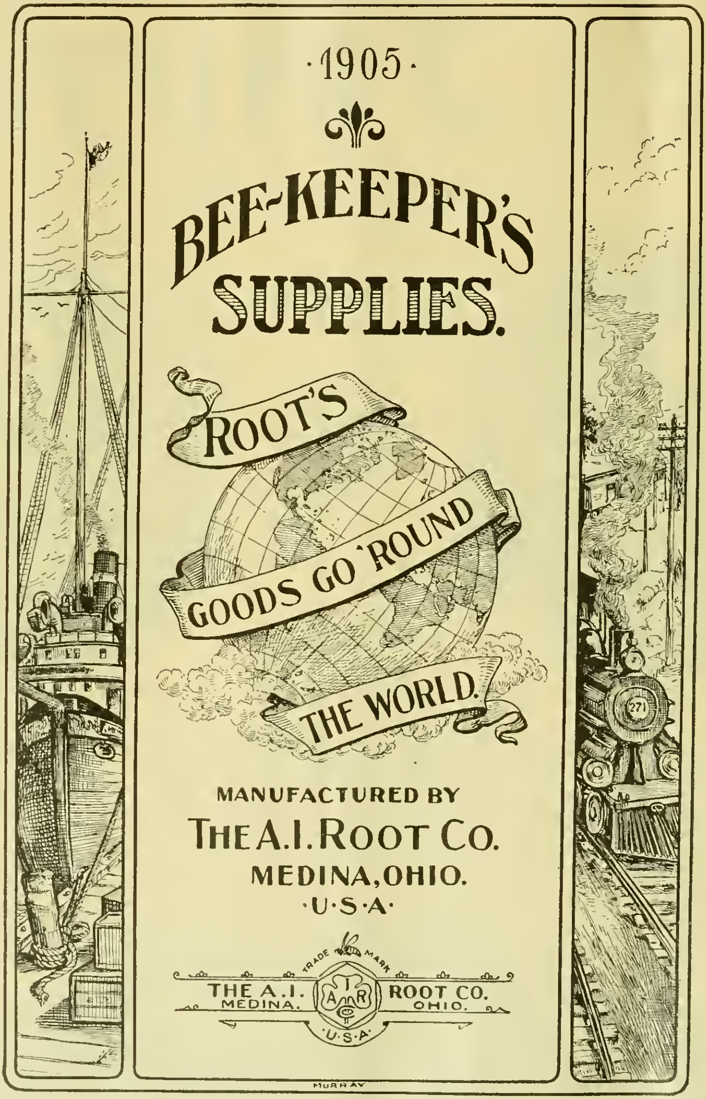
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GEORGE W. YORK, Editor. CHICAGO, ILL., DEC. 15, 1904. Vol. XLIV—No. 50.

Editorial Notes and Comments

The Kinetoscope at Bee-Conventions.

Mr. Ernest R. Root is a versatile man. He can do so many different things, and do them all so well. His latest attempt is the management of a kinetoscope, by which moving pictures are thrown on the screen—pictures in which every motion is shown just as if the very pictured thing itself were in actual operation before your eyes.

For instance, the hiving of bees, looking for the queen in a colony, and, in fact, every motion made in the manipulation of a hive and colony, or the hiving of a swarm, are presented in perfect life-likeness. This was the very interesting feature of the Wednesday evening session of the recent Chicago-Northwestern convention. The hall was crowded, and the whole performance was greatly enjoyed by all.

This was the first appearance of moving bee-pictures in the United States. They were of English manufacture, and so were of English hives and English methods and manipulations. The usual quick action of the apiarian operator as the result of a bee-sting was fully appreciated by the duly initiated observers. As an experiment, live bees were caged between a double glass and also reflected on the screen. The way the shadows of these bees scurried around was certainly surprising as well as amusing.

In addition to the kinetoscopic exhibition, Mr. Root also gave a stereoscopic display, showing various pictures of the factory and apiary of The A. I. Root Co., besides portraits of many prominent bee-folks, apiaries, parts of the bee—such as the tongue, eyes, sting, etc.—and many other pictures "too numerous to mention".

Mr. Root is a great entertainer with his stationary-and-moving picture exhibition. He gave the same show both at the Cincinnati and the Minneapolis convention since the Chicago-Northwestern meeting. Don't fail to witness it if you can possibly attend any convention or other place where it may be given.

National Nominations and Elections.

Relative to an item published recently concerning the nomination of candidates for the National Bee-Keepers' Association, Mr. H. H. Hyde, of Bexar Co., Tex., writes us as follows:

> Some time ago in an editorial item in the American Bee Journal, the position of the Texas Association was criticised in regard to its action in selecting a candidate to succeed a National director. I hesitated to say anything sooner for fear of being accused of electioneering, but now that the votes are all in I will explain.
>
> Mr. France notified us that the term of our director expired with this year, and advised us to select at our meeting our candidate to succeed the man whose term expired. Having his written advice in the matter, the convention proceeded and selected as its candidate F. L. Aten. It was our purpose to present his name at the National Convention, but the writer was ruled out of order. If we did wrong in selecting a candidate we are sorry for it, as doubtless Mr. France is also, and wish to assure one and all that it was not a piece of electioneering at all, as we thought we were doing the right and proper thing.
>
> I want to criticise our methods of electing National officers, and at the proper time I will present to the members a plan that I have in mind that will at once be fair to to one and all, give every one the same show, and will prevent undue influence being exerted for any certain candidate. H. H. HYDE.

We think Mr. France was in error. A director of the National located in Texas is just as much a director for Illinois as for Texas. So an association in Texas would have no more right to make a nomination for the successor to any director residing in Texas than would an association in Illinois or Wisconsin. Directors are not elected by or for districts or localities, but by and for the whole membership.

Again, to have publicly nominated any one at the St. Louis convention would not only have given such named person an unfair advantage, but it would have been contrary to the ruling made by the Board of Directors, which decided to have nominations made *by mail* before Nov. 1, 1904, the regular election then to be held in November.

The above is the way we understand these matters. If we are wrong concerning them, we will be glad to be corrected.

Programs for Bee-Conventions.

The success of a bee-convention does not depend entirely upon the program, or the lack of program. An important part of the convention is the social part, the meeting and shaking hands with old friends, as well as with those who have previously been known only through the pages of the bee-papers. In this regard nothing ever has equaled—probably nothing ever will equal—a bee-convention.

To be an entire success, however, there must be a chance for profit during the actual sessions of the convention, aside from the pleasure and profit to be obtained from the earnest discussions of little groups during the recesses. Just how the time shall be occupied during these sessions is a matter of moment, and like most things in bee-keeping it is, so to speak, more or less a matter of "locality". The time may be taken up largely with business matters; it may be taken up entirely with the reading of papers; it may be taken up entirely with a question-box; it may be divided.

One who was in attendance at the recent convention in Chicago, thus writes:

> "That Chicago convention was a success. There was lots of bee-talk; that is the stuff to suit beginners, and it seems the older ones like it, too. One of the veterans who had come more than a hundred miles, said to me: 'Say what you will, the thing to make a live convention is the question-box'.
>
> "But it seems a question-box will not run itself, for another said: 'Yes, a question-box is all right if you have the right man to run it. If you have a stick for a presiding officer you are likely to have some of those awful pauses that occur in a prayer-meeting when the leader says: 'The meeting is now in your hands'. Or, the discussion may run off into some trifling matter of no consequence, using up a whole lot of time for nothing. The president must be wide-awake, keeping things closely in hand, ready to draw the reins when some one strays from the question, but wisely allowing leeway when such straying is likely to lead to something of value, and having the knowledge and skill to call out sometimes those members who have had experience upon the subject in hand with little inclination to get on their feet.
>
> "At any rate, that Chicago convention was all right, for I heard more than one say that he had gotten more from it than from the St. Louis convention."

One thing seems pretty clear, that the time will likely never come when live discussions will cease to be for the veteran as well as the novice the most interesting part of a convention. Business matters can not be barred out in all cases—they may be of first importance, but they should occupy only the time that necessity requires. Essays can be read in the bee-papers; their claim to a place on a convention program is doubtful, except in some cases when a short and crisp presentation of a subject opens the discussion; with the right men convened there is no need for such opening.

No other where can the same points be so well brought out as in the sharp face-to-face convention discussion, and just so far as possible such discussion should have the right of way.

Foreign Bee-Keepers' Societies.

In Europe bee-keepers seem more given to organization than bee-keepers in this country. There are more societies, they have more conventions, and larger attendance. In Praktischer Wegweiser mention is made of the Central Association of German bee-keepers, with a membership of about 40,000—37,242 in 1903 being reported.

Those of us who talk about our National being the largest association of bee-keepers in the world evidently know little about what is going on abroad.

Miscellaneous News Items

Among the Callers at this office immediately preceding and after the meeting of the Chicago-Northwestern were the following: W. Z. Hutchinson and L. S. Griggs, of Michigan; Gus Dittmer and Nicholas Jacob, of Wisconsin; J. J. Baumgardner, of Illinois; and Mr. Ellis, of Vermont. We are always glad to have our bee-keeping friends call when they are in Chicago. We are at 334 Dearborn Street, in case you ever want to call on us.

* * *

The Marshfield Mfg. Co.—On Thursday, Oct. 20, we arrived at Marshfield, Wis., at 2:15 p.m. We at once inquired for the office of Hafer & Kalsched, and found it after a five minutes' walk up town. Messrs. Adam Hafer and Henry Kalsched, his nephew, are the Marshfield Mfg. Co. Both are energetic business men. Mr. Hafer, however, is much the older, and having accumulated enough desires very much to retire. He was a brave soldier in the Civil War, having passed through 20 engagements, being one of about 150 that escaped death in his regiment of over 1000 men. He is president of the First National Bank of Marshfield, and has large interests not only in the mill at that place, but in timber land elsewhere. During the winter they run a logging camp of about 80 men and 40 teams. Had it not rained they had expected to start for the camp the day we were there. For once we were glad it rained, else we would likely have missed seeing Mr. Hafer. He has been in the lumber and logging business all his life, and seems never quite so happy as when engaged in that work.

As we entered the office of Hafer & Kalsched we met Mr. Wm. Eggebrecht, a genial gentleman who for 12 years has been in their office and employ.

In about an hour Mr. Hafer drove us over to the mill in his buggy. This mill is located about 1½ miles away, just at the edge of the town. There we met Mr. Kalsched, who is manager of the establishment. He is a very pleasant man to meet, and took much interest in showing us the bee-supply part of their factory. They were making sections at the rate of about 30,000 a day, also hives, supers, fences, etc. Heretofore they have made only sections, but now they will manufacture everything that is made of wood in the bee-supply line. They had on hand several million feet of the finest basswood lumber for making sections from their own lumber camps. They use the best quality of lumber in all their bee-supplies. They are also manufacturers of all kinds of stuff for building a complete house. The material for many of the beautiful houses of Marshfield was turned out at their mill and factory.

After inspecting the mill Mr. Hafer drove us around the town, which has about 7000 population. It has excellent schools, churches, and everything else that goes toward making a thriving little city. It is situated in a splendid agricultural region, and gives promise of continued growth and prosperity. Mr. Hafer is one of the oldest residents, having come there from a lumbering district in Michigan many years ago. He has seen Marshfield grow from practically nothing in the woods to what it is to-day.

The Marshfield Mfg. Co. is now in a position to compete with any of the bee-supply factories anywhere. They are near the sources of supply of the most and best lumber used in making sections, hives, etc. They have the latest improved machinery for turning out the work rapidly and well. They are a reliable firm to deal with, and mean to push out for their share of the patronage of the keepers of bees in this country.

John Day Putnam, father of W. H. Putnam, of Pierce Co., Wis., died in Los Angeles Co., Calif., Nov. 20, 1904. Coming from Connecticut, he settled in Wisconsin in 1859, but removed to California on account of ill health in 1891. Mr. Putnam was a prominent citizen, having been a soldier in the Civil War, and holding many important public offices during his life. His wife and seven out of nine children remain to mourn the departure of a husband and father beloved.

* * *

Miss Jessie E. Marks, eldest daughter of Mr. W. F. Marks, of New York, the chairman of the Board of Directors of the National Bee-Keepers' Association, has recently been appointed to a clerkship in the Division of Apiculture, Bureau of Entomology, United States Department of Agriculture, Washington, D. C. Miss Marks has been her father's helper and clerk for several years, and in the recent Civil Service examination, to fill the newly created position of "Apicultural Clerk", she secured the highest general average. Miss Marks is certainly gaining high marks in her career, and all will rejoice to know that real merit has won in her case.

The Minnesota State Convention, held in Minneapolis last week, was well attended. It was also a profitable meeting. There were present from a distance, Ernest R. Root, Emerson T. Abbott, and the Editor of the American Bee Journal. Officers wers elected as follows, nearly all being re-elections:

President, Dr. E. Q. Jacques; 1st vice-president, Scott La Mont; 2d vice-president, J. A. Holmberg; 3d vice-president, J. P. Doll; secretary, Mrs. W. S. Wingate; and treasurer, Dr. L. D. Leonard. Executive committee, H. G. Acklin, Wm. Russell, and J. Kimball.

* * *

General Manager France has been traveling around a good deal lately, as will be noticed by the following, under date of Dec. 8:

> I have been in seven States of late, and from letters from others I learn the drouth is prospecting a *light clover* honey crop for 1905.
>
> The Pennsylvania State convention was a good one, several States being represented.
>
> National members having choice honey should get a fair price for it, or hold it if able. N. E. France.

Opinions of Some Experts

Age of Larvae Bees Selected for Queen-Rearing.

19.—(*a*) *When a colony is made queenless, and the bees have eggs and larvæ of all ages, please say what you believe will be the age of larvæ selected by them for queen-rearing.*

(*b*) *On what do you base your belief?*

S. T. Pettit (Ont.)—a. I don't know.

Jas. A. Stone (Ill.)—a. I am not prepared to say.

Prof. A. J. Cook (Calif.)—a. It varies. b. Direct experiment.

G. M. Doolittle (N. Y.)—a. From 36 to 60 hours old. b. Practical experience.

C. Davenport (Minn.)—I do not know enough about this matter to express an opinion.

Eugene Secor (Iowa)—a. I think they will choose the larva that will soonest make a queen.

Dr. C. C. Miller (Ill.)—a. About 2 days old. b. On actual observation in hundreds of cases.

J. M. Hambaugh (Calif.)—a. From 3 to 4 days old. b. By observation and established authority.

C. P. Dadant (Ill.)—a. From 1 to 3 days, usually, though sometimes older. b. On my eyes.

R. L. Taylor (Mich.)—a. From 1 to 5 days. b. On my own experience and Dr. Miller's experiment.

E. D. Townsend (Mich.)—a. About 2 days; a little less rather than more. b. They usually hatch about the 11th day.

C. H. Dibbern (Ill.)—a. Usually larvæ of several days from the egg. b. More on hearsay than from actual observation.

O. O. Poppleton (Fla.)—a. This varies so much that I don't believe there is any rule. Sometimes they seem to select eggs.

N. E. France (Wis.)—a. Much depends upon conditions. Generally just-hatched egg is used, and will hatch in 12 days.

R. C. Aikin (Colo.)—a. In full colonies in a honey-flow they use very few over 4 days from the laying of the egg, some 5. b. My belief comes from experience in unqueening hundreds—yes, thousands—of colonies, and finding that rarely does the first queen emerge under 12 to 14 days. It may be different with nuclei, and under less favorable conditions.

L. Stachelhausen (Tex.)—a. I did not experiment in this respect as yet. b. My belief is based on experiments of others, especially of Dr. C. C. Miller.

Adrian Getaz (Tenn.)—a. I think 1 or 2 days. b. The size of the larvæ that I usually find in queen-cells that have evidently been made during the preceding 2 or 3 days.

E. S. Lovesy (Utah)—a and b. From personal experience, and from the experience of others, I would say from 1 to 3 days, usually using eggs not more than from 1 to 2 days old.

P. H. Elwood (N. Y.)—a and b. Our queens, under the above circumstances, hatch out in 10 days with ordinary summer temperature. In other words, it is safe to wait 10 days to cut cells.

Dr. J. P. H. Brown (Ga.)—a. They will usually select larvæ about a day old. They will, under certain conditions, use younger larvæ; and will also use larvæ 3 days old. b. My belief is based on observations inside the hive, and these observations embrace 30 years as a queen-breeder.

Wm. Rohrig (Ariz.)—a. During the first 2 or 3 days after the colony has been made queenless. I believe the larva chosen will not be over 24 hours of age. b. On a number of experiments where the age of the larva had been determined as near as possible before given to the colony made queenless.

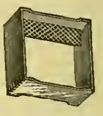
Rev. M. Mahin (Ind.)—a. The age selected is not uniform. Sometimes, not often, they will make a queen of larva that has been out of the egg 3 days. But usually, I think, they build queen-cells over just-hatched larvæ. b. I base my belief on observation of just-started queen-cells, and on the time the young queens emerge after the colony is made queenless.

G. W. Demaree (Ky.)—a. There is absolutely no certainty as to the age of the larvæ that may be selected by a queenless colony of bees to rear queens from. I have known queenless bees to develop and "hatch out" in from

9 to 13 days, lively, active, young queens. This would indicate that the larvæ selected may be from 1 to 4 days old. b. On actual observation as a queen-breeder for 5 years, and bee-crankosity for nearly 30 years.

E. WHITCOMB (Nebr.)—a. They would select the youngest layed eggs. b. The younger the egg or larva the better the queen they are able to rear from it. The value of the queen during her life, and the amount of work she is able to do, is entirely conditional on the time the bees have had to treat the larva. Where 30 queen-cells are allowed to mature in a hive one can not expect the result to be as good as where the energies of the colony were given to 4 or 5.

Contributed Special Articles



Eyes of Insects—Comb-Honey Falsehoods.

BY PROF. A. J. COOK.

I AM asked by "Reader" to give the structure and what is known of the physiology of the eyes of insects. I doubt if the general reader of the American Bee Journal would be interested in a very minute description of these organs, but a general description will surely be read with interest by every studious bee-keeper.

All imago or mature insects have compound eyes. These consist of many, often thousands, of simple eyes. Besides these there are often one, two, or three simple eyes. The honey-bee shows three of these ocelli or simple eyes. I do not think that the difference of function of these two kinds of eyes, whether of distance or acuteness, is known. I have reason to think that the bee does not see very well anyway. That is, were the bee a person we would not pronounce it a very close observer. We would not say that it used its eyes to a very good purpose. I certainly have detected bees making some very curious mistakes, where we would think that accurate observation would have brought different results.

The structure of each simple eye, whether one of the ocelli or the parts of the compound eye, is much the same, and suggests the structure of our own eyes and the eyes of the higher animals. We find the form, however, quite different from the eye of vertebrates. Instead of being subspherical it is cylindrical. In front we have the window, so to speak, the clear transparent cornea. Some distance back, as we should expect, comes the crystalline lens, and farther back we find, as we should also expect, the retina. The humors also remind us of the same in the eyes of the higher animals. As is general in the eyes of invertebrate animals, we find the retina quite different from the same in the vertebrate eye. True, we find something like the rods and cones, but they point forward instead of back, and so the image is front instead of back.

The most interesting thing is to find how these many small eyes act. We know, positively, that our eyes act as one, and the loss of one does not seriously impair vision, except to make it more difficult perhaps to determine perspective. It seems now pretty well established that the eyes of insects, that is, the separate eyes of the compound eyes, act each separately, each seeing a part of the object, and thus the object may be said to form a mosaic, or, to put it differently, each little eye or facet sees its own part of the object. Each is guarded by a sort of a diaphragm so that it images only its own part of the thing mirrored in the eye. We see, then, that if this view is the correct one, the destruction of any of these simple eyes or facets would by just so much impair the vision, or cut off so much of the object looked at. Each of the simple eyes sees part of the object, and that is imaged in none of the other facets.

That the compound eyes are used for long range, and the ocelli for near vision, or *vice versa*, is, I think, more than we surely know. I think that the compound eyes are the more important, as they are always present, while the ocelli are frequently wanting altogether. The greater development of the compound eyes would lead to the same conclusion.

SO-CALLED MANUFACTURED COMB HONEY.

I was pleased at the emphatic way in which the National convention took up the matter of the oft-repeated falsehoods that comb honey may be, and is often, a fraud or artificial make-up. The fact that honey is a superb food element, one of the very safest sugars, should make us all jealous of its good name. The truth that it can not be fabricated by any but the bees should be known by all.

I have a suggestion to make, and that is, that we all write the truth of this matter for our local and State papers, so that the right of it shall be more widely known. I propose to do this at once. Of course, these articles will be more or less widely copied, and so the truth will be pretty well spread, and the editor that is so far behind as to rehash the nonsense will become as he ought to, a laughing stock.

Let us scatter this important truth broadcast, in the interest not only of the bee-keeper, but of the consumer of honey. Every one ought to know that when he buys comb honey he is surely getting a pure and most wholesome article of food. Los Angeles Co., Calif.

❧

A Report for the Season of 1904.

BY WM. STOLLEY.

ANOTHER summer has passed, and on this day (Nov. 10) the earth is covered with a 6-inch layer of the "beautiful white snow" for the first time in the approaching winter.

I finished the winter packing of my bees Nov. 7, and everything in my little apiary of 42 colonies is in tip-top shape now.

Each colony has from 30 to 40 pounds of winter stores in double-walled hives, and they will now repose undisturbed until the soft zephyrs of spring will recall them to renewed activity. Generally, we have many fine days during the winter in Nebraska, so the bees can have cleansing flights, but it has happened that my bees had no flights for 105 days; therefore I use all possible precautions to prepare them always for the worst that may happen.

I started in last spring with 40 colonies, spring count, and obtained from 35 colonies 3130 pounds of extracted honey, and from 5 colonies in New Heddon hives, 354 sections of nice comb honey; and, besides, 350 pounds of honey set aside in brood-combs for feeding next spring.

Thus I got 3834 pounds of honey, of which 3484 are for the market except whatever may be used for home consumption.

From cappings I got 54 pounds of nice wax. My aim is to prevent increase as much as possible, and although I had 15 swarms issue from the 40 colonies, I have for winter only 42 colonies. All queens in the lower tier of my bee-shed I keep clipped, but in the upper tier a few colonies were allowed to have queens unclipped.

HIVING BEES WITH A SHOT-GUN.

Now it happened that three swarms issued with queens unclipped, and these swarms proved to be high flyers, and clustered in soft maple trees, about 50 feet high. Being 73 years old, I did not relish the idea of climbing the trees after them, but instead concluded to apply the "shot-gun remedy".

They were fine swarms, with the best of queens, and, as it happened, had clustered on twigs about one inch in diameter. My Winchester repeater, loaded with No. 8 shot, worked admirably, and brought down the clusters of bees in every instance, right in front of hives properly adjusted. Of course, the twig on which the bees cluster has to be shot off if possible a foot, or two feet, above the cluster of bees. It worked well.

In thus hiving bees by means of a shot-gun, proper caution should be taken to place the hive at the exact place, so that the falling cluster of bees will land in front of and near the entrance of the bee-hive. Should they fall right on the hive, many bees will be smashed and crippled.

By taking the proper bearings at right angles, the exact spot can easily be ascertained where the cluster must strike the ground.

I always shall use the shot-gun on bees when they cluster high up in trees and the cluster swings free and is not settled on a big limb or the trunk of the tree.

METHOD OF TREATING ROBBING.

In treating cases of robbing, I found long ago the following procedure the most effective, and as I have tried it frequently, and always found it satisfactory, and far ahead of the advice generally given in the bee-papers, I will give my way of doing here:

Unless general robbing is going on throughout the apiary, such as I had two years ago, when returning home after being away some three weeks, copious feeding outdoors, and right in front of the apiary is, as far as I have tried it, and know, the only sure and quick way to stop it.

But when robbing has just begun, and but two colonies are affected, the one doing the robbing, and the other being assailed, robbing must be treated accordingly. Almost always the robbing bees come from a strong and populous colony, while the robbed colony almost always, unless it is queenless, is weak in bees, and not able to withstand the attack of its assailants.

In such a case I close the entrance of the hive of the assailed colony, with a wire-screen covered frame, of which I have always several ready for immediate use. Even if thousands of robber-bees have taken full possession, it takes but a little while until I have the last robber out.

When the surface cage thus applied is filled with home-hurrying robbers, I dash a handful of flour through the wire-cloth on to the bees, and at once release them; but fasten the screened frame again, thus keeping out all new would-be intruders. At the same time the robber colony is located by the returning flour-marked bees.

It takes but a little while when the last robber-bee has filled up and is allowed to return home, and the assailed colony is cleared from intruders.

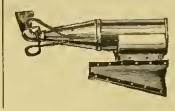
Next, the screened frame is fastened for the day, and shaded by a board large enough to cover the front of the hive. At night, when all bees have returned to their hives, I slice an onion and push three or four slices well into the entrance of each hive (of the robbers as well as of the robbed), thus making them all smell alike, and exchange the locations of the two hives, opening at the same time the hive-entrance of the colony assailed, full width.

On the following morning it is amusing to watch and see the actions of the robbers. They will carry quite a lot of honey, and more than the previous stolen booty, out of their own home into the hive they have robbed. Thus stores as well as bees of both colonies affected are equalized, and very soon quiet and peace will be re-established.

But few bees are killed by this method, and those that have to suffer the penalty of death are largely the most greedy and guilty robbers.

I wish we could find a way as effective and applicable for the treatment of all monopolists and legally privileged robbers in the human bee-hives of the world. Wouldn't that be a God-send? Hall Co., Nebr.

Proceedings of Conventions



THE ST. LOUIS CONVENTION.

Report of the 35th Annual Convention, of the National Bee-Keepers' Association Held at St. Louis, Mo., Sept. 27-30, 1904.

[Continued from page 824.]

Pres. Harris called upon Mr. York to read a paper on the subject of "Advertising and Selling Honey," and stated that Mr. York was so well known he needed no introduction to the bee-keeping industry of the United States.

Mr. York—When our secretary, Mr. Brodbeck, who unfortunately cannot be here, wrote me saying that he wished me to write a paper, and to select my own subject, I rather declined because I had been on the program so often. However, he insisted on it, and I suggested the subject of "Advertising and Selling Honey," and so I have prepared the following paper on that subject:

ADVERTISING AND SELLING HONEY.

Advertising, in these latter days, has become almost a science as well as an art. To the business that hopes to be successful advertising is a necessity. While in some instances it is rather expensive, it must be indulged in, and that liberally and constantly.

Advertising as applied to honey as a table article has never been attempted in more than an occasional and very limited way. There has been no systematic, businesslike application of modern methods of acquainting the consuming public with the value of honey as a daily food. Its medicinal, health-giving and health-keeping qualities are also less known than they should be. But just how to initiate a propaganda of advertising that shall interest consumers in honey in a manner mutually helpful, is a great question. However much I might desire to be the modern Moses to lead you through this wilderness into the Promised Land, I fear I shall fall far short of attaining such coveted honor. But there must always be a beginning, and some one who shall start. And I may as well be the one who attempts to blaze the way, even though I fail to reach the desired goal of success.

In the first place, no plan of advertising honey that would promise results can be inaugurated without the expenditure of cold cash. Yes, and lots of it. It takes capital nowadays to do things—to accomplish objects worthy our civilization and people.

In my humble opinion, the National Bee-Keepers' Association can undertake and continue an advertising campaign to increase the general demand for honey, better than any other organization, firm or individual. The Association stands for all beedom. What it does should be in the interests of every one who produces honey, and not alone for the benefit of its members. We need to get rid of a whole lot of selfishness that seems to be on board in some quarters. Only he lives truly, or in the highest sense, who helps to make the pathway easier and brighter for others. No one liveth unto himself, no matter how much he thinks he desires so to do. We are all dependent upon our neighbors whether we realize it or not. And so in advertising honey, it will benefit all producers as well as consumers.

I have believed for many years that the reason why the price of honey is so low, is because of the unequal distribution, and under-consumption. I know some think that the trouble is over-production and stagnation of the principal markets. But once let the dear public know—or be assured—that they can get the pure honey every time they buy, and also impress upon them its great value as a food, and there wouldn't be enough honey produced in all the world to supply a quarter of the people, and at a good price.

I know there are a few among us who are advising bee-keepers to "*keep more bees.*" I suppose one idea is to keep more bees, to produce more honey, so as to buy more bees and bee-supplies, and then keep more bees to produce more honey, etc. My theory is to advertise the uses of honey so that what is *now* produced will bring a higher price. Then if a bee-keeper decides to keep more bees to produce more honey he will also get a great deal more money for his crop, and so be better paid for his labor, and receive better returns for the capital invested. I doubt not more rapid progress will be made if the advertising line be followed for awhile, than to attempt to keep more bees so as to increase the flood of honey to be sold at a bargain-counter price. Why, honey should bring at least 50 percent more per pound in the markets today than it does. But the *demand* must be increased in some way. My "some way" is by advertising—letting the people know the truth about honey.

Again, the untrue statement that comb honey is manufactured—which was started in 1881—still goes "marching on," and is yet dealing its dreadful death-blows to the honey-business. I believe the only way ever to "nail that lie," is for our National Bee-Keepers' Association to *advertise*—give the public the facts about honey for awhile. Very soon, I am sure, the newspapers would "catch on," and the good work started through such advertising would be kept going, so that in a few years the evil effects of that misrepresentation about comb honey would be counteracted; and when that happy day is here, there will not be enough honey produced to supply a tenth part of the demand, and at good, paying prices to the bee-keeper.

Further, I would have our National Association to urge bee-keepers everywhere to endeavor to get their local newspapers to publish information about honey. The Association could prepare such matter, and begin by getting its members to use their influence to have it published as widely as possible. Then the bee-papers would undoubtedly do all they could to have their subscribers do likewise. With such united effort, who doubts that a great demand would soon be created for honey—a demand that would take every pound of honey produced, and at a good price?

The satisfactory selling of honey that will naturally follow the proper advertising of the same, presupposes a high-grade article and suitable retail packages. Of course, comb honey will ever be retailed by the single comb. Extracted honey, whether in liquid or granulated form, must be in convenient-sized packages. And all, whether comb or extracted, should bear the brand or stamp of absolute purity, and that in such a manner as to imply an undoubted guaranty of the same. Once get it drilled into the heads of consumers that there is no such thing as machine-made comb honey, and that the purity of the extracted article can be relied upon implicitly—then there need be no further worry as to profitable prices, or as to finding an outlet for your crops of honey, no matter how large in quantity they may be.

It is possible that a final and satisfactory solution of the advertising of honey by the National Association may include an Association brand. But I imagine a snag will be struck here that, if not properly safeguarded, may cause more trouble than benefit. I am not clear as to the Association brand business. It might be a good thing. I don't know. Perhaps a careful, competent committee to pass upon granting permits after examination of the credentials of an applicant would be the best way to do it. But as there is no uniformity of grading on the part of producers, and no very universal agreement as to taste or honey-flavors, this whole matter of an Association brand becomes a very complex one. Of course the assembled wisdom of this body may evolve something tangible and adequate out of the chaotic condition that exists. If so, we can swing our hats high with huzzas of victory. But let us make haste slowly in this matter, lest our latter end be worse than the first.

In conclusion, I want to urge a thorough discussion of the advertising of honey. It is worthy the best brain in our ranks. It is also entitled to a fair trial, I think, provided the Association's funds will warrant it. But I have no doubt many who deal in honey would be glad to co-operate, and surely every commercial honey-dealer in the land will be only too eager to lend a hand—and also pay a few dollars annually—in order to get the honey-advertising campaign properly launched. For its beneficial results will be to all who have, for marketing, either few or many pounds of the sweet product of the bees. GEORGE W. YORK.

(Continued next week.)

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

The Chicago-Northwestern Convention.

I am just back from the convention at Chicago, and what a *good* time we did have. I thoroughly enjoyed every minute of it. And to me the most enjoyable part of the convention was the kindly spirit that pervaded, and the pleasure of looking into the faces of so many old friends, and meeting face to face so many that I had previously known only through reading or hearing of them.

Taking the convention as a whole, it was certainly a very great success. The attendance was good, and the sisters were not lacking, fully 10 percent, I should judge, being women—wish I could give the exact number, but can not.

I think those that were there were very glad they came, and I am afraid that those who were not there do not realize what they missed. It is surely a very great inspiration to meet with so many enthusiastic workers, all anxious to learn something new about the business, and willing to do their part towards helping others.

One in attendance said to me: "I think bee-keepers are a very unusual lot of people". So they are. In most other pursuits, if there is discovered some new kink or knowledge concerning the business, it is kept as secret as possible. With bee-keepers it is so different. They seem anxious to give each other the benefit of their experience. If they discover a good thing they take pleasure in giving it to the rest free gratis.

It was a real pleasure—as it always is—to come in contact with our Editor at a closer range than the usual 66 miles. As a presiding officer he is a success, and seems always to be on the alert for anything that may add to the interest of the meeting. A bright thought of his at the present meeting took the form of a little paper tablet that the brothers could put in their vest-pockets, and the sisters—well, they are lacking in vest-pockets, and mostly in other pockets, too—but these tablets were small enough to be easily carried in a hand-bag. They were to be used for voting blanks, also for writing questions. You see, many of the sisters were too timid to speak right out in meeting, but they could write their questions and have them discussed on equal footing with the brothers. Very convenient were these tablets, and thoroughly appreciated by all. Our Editor deserves a vote of thanks for the same.

Now, I really wish something might be said to induce more of the sisters to attend our next convention. Let's have an attendance that will equal, if not exceed, that of the brethren. I know you will all enjoy it, and, more than that, it will do you good. Just try it and see.

◆

Thanksgiving and Good Honey Crops.

Thanksgiving has come and gone. How many of the sisters gave thanks on account of good crops of honey? Tell us about it.

◆

A Report—Covering Over Sections.

DEAR MISS WILSON:—As you have requested the sisters to report the season's work and honey crop, I will give my report.

From 5 colonies I obtained 120 pounds of comb honey, 86 of white clover, and 34 of dark honey, besides about 20 boxes half filled.

Last fall I put away 12 colonies, all well packed and with plenty of stores. It was very discouraging last spring, opening hives of dead bees, and one hive was stolen in the night. I use the Danzenbaker hive; that is, about half of my bees are in that hive, and half in the 10-frame Langstroth chaff-hives.

I would like your opinion on the best way of covering sections on the hive. I use the Danzenbaker super with tall sections, and follow his directions in covering sections with paraffin paper, then newspapers packed over, and then the honey-board with the winter-case on top of all. It keeps the boxes very clean when the bees do not eat away the paper. I have heard that he now discards the paper. Perhaps the bees work to better advantage without the paper packing.

I have seen in the American Bee Journal that one person recommends the honey-board only, and a bee-space over the sections.

I enjoy the sisters' corner in the Bee Journal very much.

Dutchess Co., N. Y., Nov. 10. S. E. Wiley.

Try having nothing but the cover with ¼-inch space over the sections. You will probably like this as well as anything.

A Canyon Picture and Apiary.

I send herewith a picture of the beautiful canyon in which we have had our apiary for the last three years. A late forest fire has destroyed the surrounding bee-pasture, and necessitated a removal of our bees. I am sure that you will think the photograph very beautiful.

Los Angeles Co., Calif. Mary L. Smale.

APIARY OF E. J. SMALE & CO., LOS ANGELES CO., CALIF.

It is indeed a beautiful picture, and makes me wish I could be there; it also brings back forcibly to my mind our delightful Denver trip, when the National met there. How I did enjoy it. The beautiful mountains, canyons, and the magnificent scenery, is something I shall enjoy in memory as long as I live.

Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses. By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

CUCUMBER HONEY (?).

If Dr. Miller's bees have ranged 200 acres of cucumbers several years and still he is unfamiliar with the quality, color, yield, etc., it can not be that the yield is exactly overwhelming. If 200 acres of basswood trees could be put down where there were none before it would compel bee-folks to know something about the new kind of honey. Page 746.

EXTRACTING SUPERS ON HIVES IN WINTER.

The question whether extracting supers might be left on the hive over winter is up on page 746. One of the reasons for having them taken off is not often mentioned, but is really quite an important reason. A colony will often start into the winter with two different clusters, one above and one below. A minor cluster upstairs that way is not likely to break up and come down till it has suffered heavily. As a rule, I think, the bees all perish up there; and the colony as a whole is just that much weakened and damaged unnecessarily. I am speaking of the Gallup frame used in supers; shallower ones would be less conducive to this kind of mischief.

SOWING SWEET CLOVER.

On page 750 we read: "Sow sweet clover. Keep still about it; and let the kickers kick". How, then, about the doctrine of this American continent, that the majority should rule? How would it do for the man in Holland to say: "Make a hole in the dyke. Keep still about it; and let the kickers kick"? You see the rest of the folks in Holland might be cranks. He, the only wise man, might be aware that there was more profit in raising carp than in raising cabbages. May he rightfully compel them (to their own profit) to engage in fish culture?

I want also to put this thing in another shape. A good many of us are trying to live honestly in the sight of our non-bee-keeping fellowmen, concealing nothing from them, and making them no unnecessary trouble. Has this man, and a few others like him, any right to cut the dykes and let the waters of public indignation rush upon us? The public are quite too willing to think evil as it is; and if their attention is once called to such sentences as those which I have quoted, we'uns, the Poor Trays, are likely to get more of the punishment than our "bad company" does. It may happen any day that some paper of the largest circulation will quote such a sentiment as the above, and make a few indignant comments on it.

SMOKING BEES—HOLDING THE BEE-SMOKER.

A novice might think from the answers to Ques. 17, that it was wicked to smoke bees, or, at least, in very bad form—a thing to be apologized for. I would say to the beginner: Don't take exactly that view of it. If bees need smoking, as they usually do, smoke 'em the first thing. You have at least the same clear right to do it that the farmer had to shear his swine. The legitimate cause which stands behind all the seeming delicacy is the danger of getting the bees to running about like a flock of sheep. That is a troublesome matter in which a little ounce of prevention is worth several pounds of attempted cure. Keep the bees on their combs, and at work at their usual vocations if possible; but also make them recognize that you are the boss—in fact, we *must have* this last, come what may in other respects. Hutchinson, on page 766, has just the right of it.

As to how to grab the smoker, 14 say with fingers next the fire, and 4 say thumbs next the fire—and 7 dodge the question. 'Spects the facts are about like this: Some smokers are so made that fingers next the fire is the most convenient and natural way. Some smokers are so made that thumbs next the fire is the most convenient and natural way. And some smokers are so made that either way goes very well. It then depends upon habit and the mere chance of how the operator unthinkingly got started.

Honey as a Health-Food.—This is a 16-page honey-pamphlet intended to help increase the demand for honey. The first part of it contains a short article on "Honey as Food", written by Dr. C. C. Miller. It tells where to keep honey, how to liquefy it, etc. The last part is devoted to "Honey-Cooking Recipes" and "Remedies Using Honey". It should be widely circulated by those selling honey. The more the people are educated on the value and uses of honey the more honey they will buy.

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Ask Doctor Miller ??

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. MILLER, Marengo, Ill.

Hive-Ventilation Outdoors—Chaff-Hives and Open Feeding.

1. What is the proper amount of ventilation for bees in a cool, wet climate where nights are cool and chilly in the spring, and the bees fly often in winter and try to rob everything that is open? I have my bees in 8-frame hives with grain-sacks and paper over them, with an entrance 2x⅜ inches. Is it too small?

2. Bees need but little protection from the cold here as it seldom freezes, but it is too wet and chilly in the spring for rapid brood-rearing. Do you think the chaff-hive would suit here? I feed sugar syrup in the open, and feed at all times in the winter whenever we have a clear day, with good results. I like to feed in the open, as the bees seem to enjoy it so well. WASHINGTON.

ANSWERS.—1. That's pretty close business; likely twice as much ventilation would be better.

2. I don't know, but I'm afraid the chaff-hive would not be an improvement. It would not allow the sun to warm up the hives on bright days.

◆

Hive Bottom-Boards in Cellar-Wintering.

1. In wintering bees in the cellar, do you leave the bottom-board off the hive for ventilation?

2. If so, do you put on anything to keep out the rats and mice, if such enemies should come along, or will the bees take care of their combs and honey in such a case themselves? I think Prof. Cook says that he leaves the bottom-board on and the entrance open wide. NEW YORK.

ANSWERS.—1. My bottom-boards are left on; but that still leaves abundant ventilation, for the space under bottom-bars is 2 inches, and the entrance is 2 inches deep and the whole width of the hive. If I had entrances not more than half an inch deep, I should want the hives blocked up or the bottom-boards taken away entirely.

2. I have done both ways. You may be sure the bees will not take care of themselves; rats and mice will make bad work with combs if allowed undisputed possession. If you leave the hive-entrances open in most cellars, you must keep up an unceasing warfare against the rodents with traps and poison. You can bid defiance to the nuisances, however, by having the entrances closed with very coarse wire-cloth—three meshes to the inch. Even then you will have some trouble, for field-mice will have entered some of the hives before brought into the cellar. It is better, however, to have a mouse confine its loving attentions to one colony than to give it the free run of all.

◆

Making Candy for Winter Feeding.

How is candy made for feeding bees in winter? I should think there are quite a few bee-keepers who would appreciate anything on feeding bees at this time of the year. I read about it some time ago, but can not find the copy just now. WISCONSIN.

ANSWER.—You can't feed bees in winter in the North. Feeding in winter is bad for bees. Let bees alone in winter. Don't think of feeding in winter. Finish up all feeding as early as possible in the fall. Winter is no time to feed. "You can't feed in early fall now, for early fall is past, and the bees will starve if let alone"? Well, that *is* a bad case, and it's better to feed even in winter than to let the bees starve. So I'll tell you what to do.

Open the hives quietly, disturbing the bees as little as possible, and put combs of sealed honey up close to the cluster of bees. "Haven't any combs of sealed honey"? Oh, my, that's bad. Well, another time see that you have extra combs of sealed honey on hand. Save some up through the summer, piling them up on a few colonies, then in the fall you can give them wherever you think there is any lack, and if you have more than needed you'll no doubt find use for them the following spring.

But it won't do to let those bees starve, so seeing you have no sealed combs you can feed candy. You'll find directions for it in your bee-book. "Haven't any bee-book"? Oh, my, my; what a pity! If you have only one colony it will pay you to get a bee-book. You see this department is only to fill out some of the things that don't happen to be given in the books. But seeing it's you, I'll tell you how to make candy without waiting for the book to come that you're going to order.

Heat extracted honey—be sure you don't burn it—stir into it best granulated sugar as long as it will stir in; then put it on a board or table and knead into it all you can, so as to make a stiff dough. After it stands awhile, if it seems too thin, knead in some more. It will take about four times as much sugar as honey. That's called Scholz or Good candy, the same they use for queen-cages, only they use powdered sugar for queens. If it is dry enough you can lay flat cakes of it on top of the frames, or you can first lay on the frames some kind of open cloth like cheese-cloth. Or, you can put a slice of it in cloth between the frames.

You can also make candy without the honey, just common candy. The process is simple, but great care must be taken not to burn the candy, for burnt candy in winter is death to bees. In a vessel of hot water on the stove stir slowly granulated sugar, and keep stirring it to prevent burning until a little of it dropped into cold water is brittle to the teeth. Then pour out into pans slightly greased, making cakes an inch thick or less. These cakes can be laid over the frames and covered up.

That's the way to make candy; but don't forget the bee-book.

◆

Moving Bees Far—Texas as a Bee-Country.

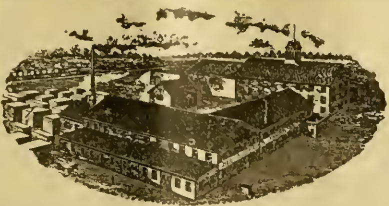
1. I will be moving to Houston, Tex., soon, and would like some information about packing bees in an emigrant car.

2. Also, any information about that locality relating to the bee-industry would be highly appreciated. NEBRASKA.

ANSWERS.—1. The special points to look after are these: Place the hives in the car with the frames running lengthwise of the car, or parallel with the rails of the railroad; have them fastened in the car so they can not move; and see that the bees have enough air so they won't smother. If there are only a few, they can go on the floor. Put them up against one end of the car; and on the floor nail pieces so as to hold the hives rigidly in place. If they must be piled more than one high, a board from one side to the other of the car must be solidly nailed. Don't have the board flat against the hives, but with one edge against them, so the board can not bend when the hives push against it. The ventilation will be by wire-cloth, the particular way of using depending upon the hive. If you are fortunate enough to have bottom-boards like mine, 2 inches deep, all the ventilation necessary will be to close the entrance with wire-cloth. Wire-cloth may also be used over the top, and if one hive rests on another cross strips must be used to prevent the upper hive from shutting off the ventilation below. If the weather is cold, less ventilation will answer.

2. Many parts of Texas are considered good for bee-keeping. Perhaps some one in the locality mentioned will tell us about it there.

Some Facts About Honey and Bees.—This is the subject of an article written by Mr. J. E. Johnson, and published on pages 581-82 of the American Bee Journal for Aug. 25, 1904. We have republished it in 4-page leaflet form for general distribution, and furnish it, postpaid, at 35 cents per 100 copies. Send all orders to the office of the American Bee Journal.



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Reports and Experiences

The "Baby Nucleus" Again.

Mr. Hasty, on page 810, referring to my letter on pages 718 and 719, says some things hard to be understood. He says if the editors had refused to publish anything regarding the baby nucleus the craft would have been better off. Now, just here I am not able to understand him, whether he means the queen-breeders or the entire bee-keeping fraternity; but he seems to think in some way that the articles have been of use to the bee-keepers.

I will admit that I am from Missouri, and have to be shown a thing, and I think Mr. Hutchinson demonstrated a like character when he refused the first article and published one later. He, no doubt, like many of us, thought the baby nucleus was an advancement in queen-rearing.

I want to say, having used the baby nucleus for three years, I now come to the conclusion that in this country it can be used to great advantage, but not to as much advantage in the North and West, where they have cool nights so much of the year. One who uses the baby nucleus must of necessity carry the nuclei clear away from his apiary, for two reasons: First, they are liable to be robbed; second, there being so few bees they are so likely to return to the parent hive, and so weaken or entirely abandon the nuclei that it will cause heavy loss of queens.

I hope Mr. Hasty will tell us plainly what his hopes and fears are regarding the baby nucleus.

Goliad Co., Tex. JOHN W. PHARR.

Using Comb Honey in Candy.

I notice on page 788, an editorial that speaks of a confectioner who uses comb honey instead of extracted honey; also, it does not explain ex-

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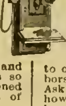

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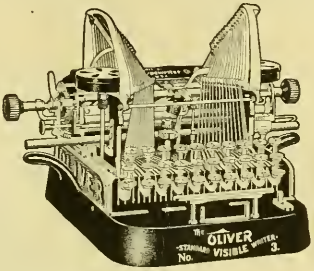

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actly why comb honey should be more useful than extracted honey in the manufacture of high-grade candies. Perhaps I may be able to enlighten some of the readers of the "Old Reliable" on this subject, as I have had a little experience along this line.

The way I learned the value of comb honey in making candy is as follows:

I was making candy for my bees, and as it happened I found I didn't have more than half the sugar I needed. So I added as much comb honey by weight as I had sugar. When the candy was ready to remove from the fire, I put the vessel containing the candy into another vessel containing cold water, and stirred it with a spoon until sugared—or, shall I say, candied?

'Now this batch of candy was nice, and resembled the queen-candy that we make by using pulverized sugar and extracted honey. It could be rolled up in balls or any other shape one would wish it to be.

When this was used up I attempted to make another lot of it, but this time I used extracted honey, thinking, of course, that the honey was the cause of the first lot being so nice. But this

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second lot was hard and coarse-grained, and nothing at all like the first lot. I didn't understand the cause at first, but after thinking the matter over I decided that the wax that was in the comb honey was what was needed. So I melted it over and added a lump of beeswax, and this time it was soft and pliable like the first lot. With further experiments I found that I could not make this candy with wax and sugar alone, and that I would have to use at least half honey before I could get it to granulate fine enough to suit me.

This, I think, is the reason why the confectioner likes his honey in the comb. He gets two ingredients in one.

This may be useful to bee-keepers who at times use candy to feed impoverished colonies. I find that for winter and early spring feeding it is much better than feeding liquid or diluted honey, as it does not excite the bees.

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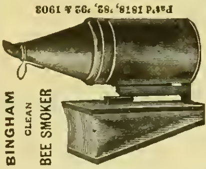

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And, also, it is not half as much trouble, and costs only about half as much, as the bees do not seem to require nearly so much of it as they do when fed liquid honey in a feeder.

This method of feeding requires no feeder. Ten pounds of this candy is placed right on top of the brood-frames, and over this is placed a piece of oiled cloth. Over the oilcloth is put an empty super and a cover. This is all that is needed, as it will keep a large colony all winter in my locality.

I received my first lessons in bee-keeping from the "old reliable" American Bee Journal, and have much to be thankful for. E. L. BUSSEY.

Johnson Co., Tex.

Sainfoin a Hardy Plant.

The past season was rather poor for honey, though much better than 1903. I notice sainfoin has been mentioned several times in the bee-papers lately. I tried a small patch in my garden, and it has stood our cold winters for three years. It blossoms earlier than red clover, and bees are very thick on it. I wish some one who has tried it extensively would give his experience. H. H. PORTER.

Sauk Co., Wis., Dec. 6.

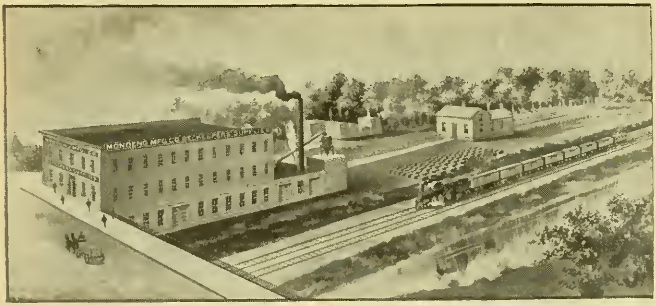
Bulk Comb and Section Honey—A Correction.

In a recent issue of the American Bee Journal I was misquoted in a report of my statement before the Texas association in reference to section honey. Here is the quotation:

"Mr. Hyde then stated that it was his intention to produce section honey, and that the market on bulk comb was in danger of being overstocked."

I stated that it was my intention to produce *some* section honey for shipment to the early northern markets; I advised others to do likewise, and also advised them to continue producing *bulk comb* as much as our market would take.

Our market on bulk comb honey is continually increasing, and it takes more and more each year to supply it;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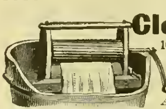

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Send for free catalogue.

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we are extending the market, and now selling bulk comb honey where even two years ago it had never been heard of.

Bee-keeping is taking on great strides and rapidly increasing, and my caution was given because I did not want bee-keepers at any time to glut the market on our article *bulk comb.* I showed them that section honey for the early northern market was also a profitable article, and advised them to mix in some section honey.

All prospects point to a big bee-year in 1905. H. H. HYDE.

Bexar Co., Tex., Nov. 30.

New York.—A bee-keepers' institute will be held in Canandaigua, N. Y., under the auspices of the Bureau of Farmers' Institutes. Mr. N. E. France has been engaged by the Department of Agriculture as speaker. There will be two sessions each day. The business of the Ontario County Bee-Keepers' Association will be transacted during a part of these meetings.

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We can ship at once on receipt of order, 1-lb. and ¾-lb. Tip-Top Honey-Jars, (octagon shape) at these prices, f.o.b. Chicago:
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YORK'S HONEY-VINEGAR
This is a new thing, made by The York Honey Co., and should be used by all who also buy and use honey Furnish it to your home trade. Sample, postpaid, 10 cents, to pay postage and package. A 10-gal. keg for $3.00, f.o.b. Chicago.
Cash with order in all cases. Address,
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Boston pays good prices for a fancy article.
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Take advantage of the DISCOUNTS allowed on EARLY orders.
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Honey and Beeswax

CHICAGO, Dec. 7.—The market is well supplied with all kinds of honey; the demand is of a light nature. Fancy comb honey brings 14c, but quality as well as appearance is necessary; No. 1 sells at 12½@13c; off grades difficult to move at 1@3c less. Extracted, choice white, 7@7½c; amber, 6@7c, with off grades about 5½c per pound. Beeswax, 30c.

R. A. BURNETT & Co.

NEW YORK, Dec. 7.—Receipts of late have been quite heavy, and while there has been a fair demand, it has not been up to former years and stocks are somewhat accumulating, consequently prices show a tendency to decline, and in large lots quotation prices as a rule are shaded. We quote fancy white at 14@15c; No. 1 white, at 12@13c; amber, 11c; buckwheat, 10c. Extracted in fair demand at 6@6½c for white clover; 5½c for buckwheat; 50@60c per gallon for Southern, according to quality. Beeswax firm at from 28@29c.

HILDRETH & SEGELKEN.

PHILADELPHIA, Dec. 8.—Honey has not been quite so active in the last 10 days, but more demand is expected soon, as more honey is sold at the present time than at any other season of the year. We quote: Fancy white, 15@16c; No. 1, 13@14c; amber, 11@12c. Extracted, white, 7@8 cents; amber, 6@7c. Beeswax sells quick, 25@26c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

BOSTON, Nov. 19.—Recent heavy arrivals together with very low quotations from some other markets have had a tendency to weaken our market. We quote fancy No. 1, 15@16c; No. 2, 14c, with ample stocks; absolutely no call for buckwheat. Extracted honey, 6@8c.

BLAKE, SCOTT & LEE.

CINCINNATI, Oct. 28.—There is a marked improvement in the demand for comb honey since our last quotations. No material change in the extracted-honey market. We continue to quote white clover extracted honey in barrels and cans at 7@8½ cents; amber in barrels, 5¼@6c. Fancy white clover comb honey, 14@15c. Beeswax, 28c. THE FRED W. MUTH CO.

ALBANY, N.Y., Nov. 9.—The crop of honey is turning out to be larger than estimated, and prices are softening, favoring the buyer. We quote fancy white, 15c; A No. 1, 14c; No. 1, 13c; mixed, 11@12c; buckwheat, best, 13c; average run, 11@12c. Extracted, buckwheat, 6c; white clover, 6½c; mixed, 6c. Beeswax, 29@30c.

H. R. WRIGHT.

KANSAS CITY, Sept. 22.—Market on comb honey is quite active at $2.75 per case for fancy white stock. Extracted rather slow at 6½@7c. We look for the demand on extracted to pick up considerably with cooler weather. Beeswax in good demand at 30c per pound.

C. C. CLEMONS & Co.

CINCINNATI, O., Dec. 7.—Comb honey is now coming in more freely, and prices if anything have moderated a little. The sales made and prices obtained were for No. 1 fancy water-white comb, 12@13½c; single cases, 14c. Extracted is sold as follows: White clover, in barrels, 6½c; in cans, 7½@8c; amber, in barrels, 5¼@5½c; in cans, 6@6½c. Beeswax, 27c.

C. H. W. WEBER

SAN FRANCISCO, Nov. 22.—White comb. 1-lb. sections, 12@13 cents; amber, 9@11c. Extracted white, 6@6½ cents; light amber, 4½@5½c; amber, 3¾@4¼c; dark amber, 3@3½c. Beeswax, good to choice, light, 29@30c; dark, 27@28c.

There is said to be some inquiry for shipment, but at figures below the views of holders generally. Current values on strictly choice to fancy water-white honey are being well maintained, stocks of this description being of light proportions.

WANTED!
Fancy Comb Honey from White Clover,
in no-drip cases, at once. State your lowest price for SPOT CASH, the average weight of honey per comb, all definite and final in first letter. We answer mail and pay for goods promptly. Plenty of references if desired.
Beeswax Wanted for cash or trade.
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BEE-KEEPERS! Send me your orders for BEE-SUPPLIES for next year's use, and get the discount: Oct., 6 percent; Nov., 5 percent; Dec., 4 percent. The above discount does not apply to honey-packages. Send for catalog. W. J. MCCARTY, Emmetsburg, Iowa
44Etf Please mention the Bee Journal.

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No. 25 JARS, $5.25 a gross; with tin caps, $5.00 a gross. 1-lb. Square Jars, $5.00 a gross. Cat. of SUPPLIES free.

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The Passenger Department of the Illinois Central Railroad Company have recently issued a publication known as Circular No. 12, in which is described the

best territory in this country

for the growing of early strawberries and early vegetables. Every dealer in such products should address a postal card to the undersigned at DUBUQUE, IOWA, requesting a copy of "Circular No. 12."

J. F. MERRY, Asst. Gen'l Pass'r Agent.

32A20t Please mention the Bee Journal.

Daisy Foundation-Fastener, 50c.

Our fastener has been greatly improved, doing away with dripping down the back. It is constructed in such a way that all drippings of melted wax run on sections instead of down the back. Without lamp. Regular price, 70c; our price, 50c.

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Power Building, MINNEAPOLIS, MINN.

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American Bee Journal

Our Toil Doth Sweeten Others

44th Year. CHICAGO, ILL., DEC. 22, 1904. No. 51.

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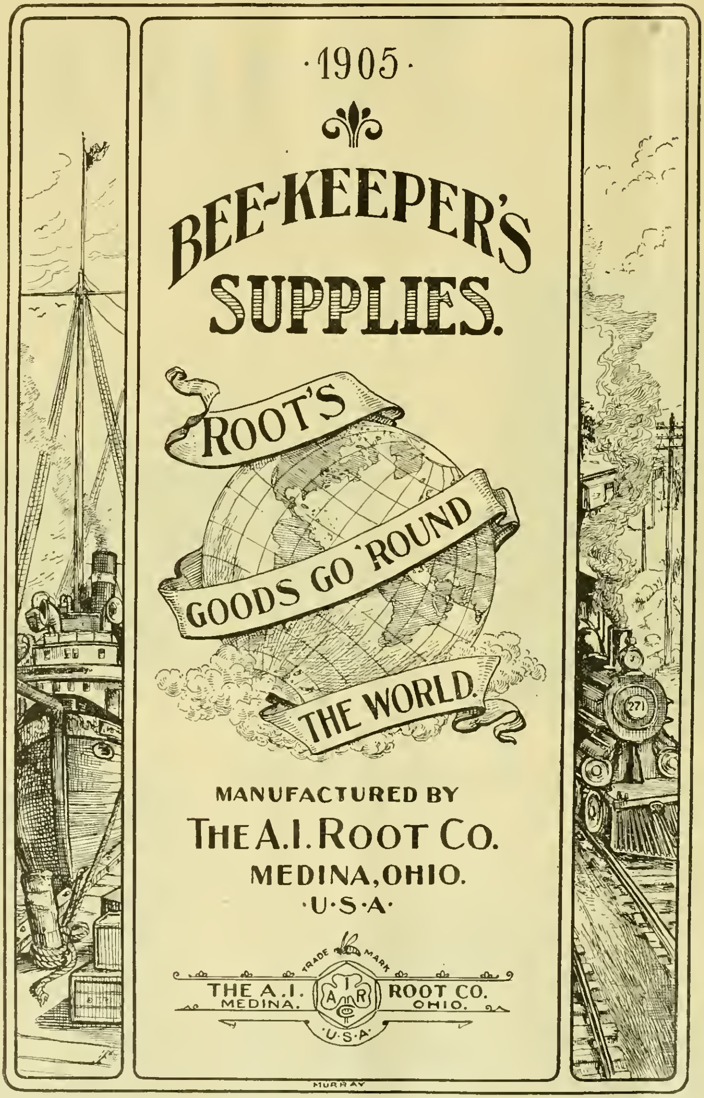
(Formerly R. H. Schmidt Co.)

MR. G. E. BACON,
Assistant of the G. B. Lewis Co.

Root's Catalog for 1905

94th Edition, 250,000.



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AMERICAN BEE JOURNAL

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GEORGE W. YORK, Editor. CHICAGO, ILL., DEC. 22, 1904. Vol. XLIV—No. 51.

Editorial Notes and Comments

Bee-Keepers' Convention Dates.

So far as it may be desirable for the same persons to attend two different conventions it is desirable that dates do not conflict. Editor Root's suggestion in Gleanings in Bee Culture may be worth considering. He says:

> It would be a good thing if those who have to do with fixing dates for conventions would arrange them so they will not conflict with some other convention date, so that one or more speakers can attend them all. For example, the Illinois State convention conflicted with the one at Toronto, Canada. Editor York had intended to go to both, but of course could go to only one. I am arranging to go to Chicago to attend the Northwestern Nov. 30, and go to Cincinnati Dec. 2, then am compelled to retrace my steps and go back to Chicago to get to Minneapolis the 7th and 8th, making double mileage. If the matter were put in the hands say of the General Manager of the National, he might suggest a set of dates so that he himself and the editors of all the bee-papers could attend all the conventions, and at the same time get the mileage down to a minimum. Such an arrangement would often make it possible for an association to get an outside speaker when it could not otherwise.

We are glad Mr. Root took up this question of convention dates. Especially if several conventions are to be held in fairly close proximity as to place, it is desirable that their dates be a reasonable time apart. It is often desired, and very desirable, that certain good convention bee-keepers attend as many conventions as possible. Such men as N. E. France, Dr. C. C. Miller, E. R. Root, E. T. Abbott, C. P. Dadant, and many others who might be mentioned, are always a big help to any bee-keepers' convention. And often they would like to attend several such meetings but can not do so on account of a conflict of dates.

Perhaps those who have charge of the arrangement of convention dates can help a little. We believe the annual State Fairs are planned so as to accommodate exhibitors who wish to attend as many of them as possible.

What is Honey?—A Question of Definition.

Some may think that a very simple question, possibly a foolish question to put in a bee-paper, while others who have given the matter some thought will, no doubt, hesitate before attempting to give a correct answer.

Just now, when the pure food question is a live one, the government is trying to get a correct definition. If the bees store sugar syrup, should it be called honey? Is it honey when they store honey-dew? Editor Root favors the view of Chemist Selser, that nothing should be included in the definition except "the nectar of flowers only, gathered and stored by the bees". The definition seemingly most in favor at Washington at the present time includes that gathered "from flowers and from the exudations of plants". This would rule out honey-dew, which is not an exudation of plants, but of plant-lice. It would, however, admit what Editor Root would reject—nectar from parts of plants other than flowers.

Cheshire tells us, Vol. I, page 264, "in vegetative organs, quite apart from the inflorescence, nectaries are occasionally present—*e. g.*......the stipules (or leaflets on the leaf-stalk) of beans are nectariferous", and that the visits of the bees to these stipules is quite the common thing.

Must California bee-keepers be forbidden to visit the bean-fields with their bees in order that their product shall be allowed upon the market as honey? May not honey include all that the bees manufacture from the nectar of plants, from whatever part of the plant that nectar be obtained?

Advertising Honey Better than Lawing.

Regarding the use of money in the treasury of the National Association, the following from an editorial in the Bee-Keepers' Review is in line with views heretofore expressed in the American Bee Journal:

> It is rapidly becoming apparent that there are other things of more importance than that of spending money on what are often little more than neighborhood squabbles in which the bees are made an excuse for a lawsuit. Too many are not careful with their bees to avoid trouble; not so careful as they would be were they not members of the Association; as they expect to be helped if they get into trouble. The helping of a man out of trouble does not, as as a rule, greatly benefit the membership. I would not say that no member should be helped when suit is brought against him in regard to his bees, as there will probably arise cases in which it will be highly important that help be given, but it is very important that, in some way, the reins be drawn tighter upon the using of money for this class of work. Not only does it use money, but these little wrangles take the time and energies of the Manager, and they can be used to better advantage in other ways. For instance, the advertising and popularizing of honey would be of value to the entire membership.

Are Bee-Supply Dealers to Be Encouraged?

There seems sometimes a disposition to look askance at all bee-supply manufacturers and dealers, as if they were the natural-born enemies of bee-keepers. For any one who holds such a view the way out is easy: He is under no sort of compulsion to pay a cent into the pocket of any manufacturer or dealer, and can let them entirely alone. Certainly they can not harm him if he has no dealings with them.

A bee-keeper may buy all his hives nailed, painted, ready for use. He may buy them in the flat, doing his own nailing and painting. He may have the lumber cut at his local planing-mill; or, finally, he may do all the sawing, planing, etc., himself. Each one should select from these four plans that one which is *for him* most economical.

The amateur, perhaps a professional man who keeps only one or two colonies of bees, may well select the first plan, getting hives all ready to receive the bees. For the great majority this would be too expensive. Equally expensive—perhaps more so—would be the last plan, to say nothing about the character of the finished product.

In a few cases the third plan may be advisable, the bee-keeper being able to get satisfactory work at his local mill at a cost less than he would have to pay the supply dealers. But the great majority will find true economy in the second plan, purchasing the stuff from the supply dealer, all ready to nail together. A strong proof that this is the most economical plan for the majority lies in the fact that that majority does thus purchase: and in this view of the case it would be a distinct loss to the average bee-keeper if the supply dealer were wiped out of existence.

Tarred Paper for Winter Hive-Protection.

Some unfavorable reports having been made with regard to this, the originator of the plan, Arthur C. Miller, in an article in the Bee-Keepers' Review, thinks the failures have not been due to the tarred paper, but to overlooking one or more factors important in any plan for outdoor wintering. He says:

> Tarred paper layed over a hive and folded down about it, just as one would wrap a bundle, and with the lower edges fastened down with strips of wood tacked on, gives a water and wind proof protection. With this should be coupled, besides the "colony conditions" before mentioned, an abundance of ventilation at the entrance. I give an entrance ½x14 inches.
>
> The tarred paper accomplishes this, keeps out water, keeps out wind, absorbs the sun's rays, which runs up the temperature within the hive, thus driving out any condensed moisture, and enabling the bees to feed, clean house, and move about. When the sun is gone it lets that heat eacape so slowly that the bees have abundant time to settle down as they should.
>
> Bees do not fly unduly from hives thus protected and so ventilated, and such bees as do fly and fail to return, are those which otherwise would die within the hive.

Miscellaneous News Items

We Wish "A Merry Christmas" to every reader of the American Bee Journal.

……

Offering Seeded Raisins to bee-keepers through an advertisement is something new, we think. But in another column Mr. H. L. Weems, a California bee-keeper, who is in Chicago for a time with honey and raisins, offers some seeded raisins that are fine.

……

Mr. G. E. Bacon and the picture of the dam right at the factory of the G. B. Lewis Co., of Watertown, Wis., are shown on the front page this week. Mr. Bacon, is an energetic, capable, and faithful assistant in the office. He also attends to the preparation of the advertising matter, and has originated several attractive designs. The dam shown is a new one, built last spring at a cost of about $1000. So the G. B. Lewis Co. have both steam and water power to run their big factory.

……

100,000 Copies of the "A B C".—This well-known and standard encyclopedia of bee-literature has just reached its 100,000th mark. A new edition for 1905 is just off the press. It contains nearly 500 large pages, and is thoroughly up-to-date in every particular. No bee-keeper who hopes to be successful can afford to be without it. It is now put up in three styles of binding, viz.: cloth, at $1.20, postpaid; half leather, $1.75; and full leather, $2.00. We club the first binding with the American Bee Journal one year, both for $2.00; the second, $2.50; and the third for $2.75.

……

The R. H. Schmidt Co.—On Oct. 21, we visited Sheboygan, Wis., where the R. H. Schmidt Co. have a bee-supply factory. We found Mr. Schmidt's oldest son, Walter, in the factory. He is a bright, energetic young man, and takes a deep interest in the business. They have the facilities for turning out a large line of bee-supplies, and their trade amounts to many car-loads each season. Mr. R. H. Schmidt is a natural mechanic, and made practically all the machines in their factory. Their section capacity is about 40,000 a day. Basswood lumber of the very best quality was on hand that would make several million sections, which is cut by their own mill direct from the log; it is second-growth and young timber.

They were expecting in a few days to install a berry-box machine, which will add to their business.

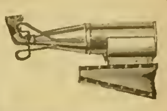
Mr. Schmidt has over 100 colonies of bees, from which he secures a good crop annually. His honey is sold to private families in Sheboygan.

For an hour or so Mr. Schmidt drove us over the city with his horse and buggy. We were surprised to see what a place Sheboygan is. It has a population of nearly 30,000, is beautifully situated on the shore of Lake Michigan, and is crowded with large furniture and other factories, employing thousands of people.

Mr. Schmidt was born in Sheboygan about 45 years ago, so he is quite familiar with everything connected with the city.

LATER.—Since the foregoing was written the R. H. Schmidt Co. have incorporated their business under the name of the Sheboygan Fruit-Box Co., and are about to enlarge their present plant to double its capacity. R. H. Schmidt is president, treasurer and general manager; Walter N. Schmidt is the secretary, and A. J. Mueller vice-president. They will continue to manufacture bee-supplies as in the past.

Proceedings of Conventions



THE ST. LOUIS CONVENTION.

Report of the 35th Annual Convention, of the National Bee-Keepers' Association Held at St. Louis, Mo., Sept. 27-30, 1904.

[Continued from page 840.]

Mr. Brown (Cal.)—I would like to mention a point Mr. York brought out regarding the protection of our extracted honey, and our brand. The adulteration of extracted honey is something that is carried on largely. I have seen great quantities of it. I have seen honey that has been fixed up for the market and put in five-gallon cans, put back into the original package and marked "Pure California Honey," where there was from 40 to 60 percent of glucose in it. I know those things are done in our large cities in the West, and Middle West; I know it is done in Kansas City, and I am pretty sure it is done in this city. Our honey that goes on the market in car-load lots to-day ends up with the consumer largely adulterated. The man who consumes our article does not know what he is using. It doubles the output and destroys the flavor; it ruins its demand. I think it is time we should take steps to protect our honey.

With reference to the matter of a brand, the Central California Bee-Keepers' Association, of which I am manager at present, has adopted the brand, and in the manufacture of our boxes we have the brand printed on the box. It says, "Central California Honey-Producers' Association. Pure Extracted Honey." The question is, How we can guarantee that the goods put up in our packages are pure when they reach the consumer? A man might receive a quantity of our packages and adulterate his honey just the same as they do now, and sell under our guarantee. In order to overcome that difficulty we have agreed upon this: We are going to have our honey sealed. First, however, it will be graded by an official grader appointed by our Association for that purpose, and every can of honey that is in a case will be sampled, a sample drawn from every can and placed in a small bottle. In the manufacture of the cases we have ordered that a hole be bored in the partition of the box about three inches deep to insert the sample. We take out the sample and place it in the little bottle and slide it down in the hole. Then when the honey is thus graded by our official grader each can has to be sealed with the Association's seal. Our goods will be protected by a guarantee, and the guarantee will be printed and wrapped around the bottle in the hole. Now, any man buying a can or package of honey coming from Central California with the seal broken will naturally have to take his own chances of that product being pure, just the same as he would any other goods protected by seal; and any man who wants to be sure his goods have not been tampered with will find the seal intact, and buy nothing else. We will have to protect our honey unitedly through our Associations, and I believe through the National something will develop before this convention closes that will bring about this line of work.

Mr. Calhoun—I think there is something practical in Mr. Brown's talk in regard to giving a guarantee of the purity of our honey. Now, with regard to another feature, the bringing before the people the advantages that are to be found in using honey from a medicinal and food standpoint. How shall we educate the people up to a knowledge of the advantages of honey in this regard? I believe we should have a concise article covering these points. I believe we can afford to have that article printed for our use, and, as Mr. Brown has suggested, with a sample going with each case of honey. I, for one, could afford to go to my local printer and have slips printed bringing forth these advantages and put one in each package of honey I sold.

Mr. De Long—I would like to make a suggestion in regard to getting up a label or advertisement of our honey as a pure article. I have produced a great deal of extracted honey in Nebraska, and I have sent a great deal to Lincoln to personal friends, and I can sell thousands of pounds in Lincoln, of my production. I tell my customers if they ever have any trouble in selling it on account of being accused of its being adulterated, to let me know and I would go to the experiment station at Lincoln and have them furnish an announcement on the purity of this honey. All I would have to do would be to pay the officials for the certificate. I think that would be an authority which a counterfeiter would not get. That is the way I am going to work it in Nebraska if I have any trouble.

Dr. Miller—I am sure that we have struck one of the most important questions that can come before this body, and that is the advertising of honey. I dislike to attempt to say very much about it because I feel that all my thoughts are in a somewhat crude condition, but it is worth while for us to talk it over at least a little, and perhaps we can have our thoughts crystallized before we are through with it. Take the case of the Kairo Korn Syrup. We can reasonably suppose thousands of dollars are spent in advertising that syrup—I am not paid anything for advertising it here—that is done probably by men of good business sense, and they are not doing it for fun, they are spending their money because it pays; if it pays to have that advertised it will pay us to have such an article as honey advertised. I believe it comes fairly within the province of this Association to do something towards advertising honey. There are only a very few points that look somewhat clear to me: one is the expense of the matter. We need a larger membership to do what we ought to do in that regard. There comes that matter of the brand, and I suspect we will strike a snag when we come to that. But there is one thing that may be said in favor of anything of that kind; if we want a brand and if that brand is good for anything—and it ought to be good for something—every bee-keeper will be likely to want to have the advantage of that brand, and that should be in such shape that only the members of the Association would have the benefit of it: the advertising would be for the benefit of all. If we could do it just as well, I should say let everybody have the benefit of it. So far as any brand is concerned, that would have to be limited, and that would help us to bring in a larger number of members, and it would also help to do a larger amount of advertising. I believe the time has come for this Association to spend perhaps the greater amount of money that it has to spend in trying to inform the public as to the matter of honey, its quality, and all that sort of thing—the things you want people to know.

Mr. Reinecke—We find so many medicines and other things that bear their own signature, where they want to build up a reputation, and the signature counts. I would suggest with us that that would go a great way.

Prof. Benton—The suggestion of Dr. Miller, that the time has come when the Association should spend most of its money in advertising honey, making its qualities known and what it is good for, brings to my mind some work I have had in mind to do in connection with the position I now occupy in connection with the Department of Agriculture. I was asked by the secretary to prepare a paper, which I have done, and I might have had some allusion in that paper to this work in a general way, but I will forestall that by making the statement. It has been suggested to me to prepare a farmers' bulletin on honey and its uses. That is simply one of the smaller publications of the Department; it may be but a leaflet, or may extend to 16 or 32 or 48 pages, and it comes within the limits of a certain law enacted by Congress which forbids the issuance of more than 1,000 bulletins if they exceed 100 pages. This comes within the limit in number, and can be printed up to 50,000; a bee-keeper can ask for a thousand copies for aught I know, and he would get them absolutely free of cost. If this Association will suggest some person to prepare such a bulletin and submit it to me, or would desire I should prepare it, I am perfectly willing to do so, and have it printed at the Department and under the Department's expense, and sent out to any list that might be forwarded there, or in quantities to the individuals themselves.

Mr. Hagood—I don't think our advertising would strike the vital points in this thing, from the fact that the other man has just as good a right to advertise as we have. We need legislation more than we need advertising. In my neighboring town there is syrup sold under the head of honey, put up by a manufacturing company of this town with a little piece of comb in it, and it looks as nice as can be. Those people have a right, I suppose, to advertise, and when we begin advertising we put our goods on the market against theirs. It seems to me we should have legislation.

Dr. Miller moved that Prof. Benton be requested to prepare such a bulletin as he suggested and have it put in the list of Farmers' Bulletins.

Dr. Bohrer—I hope the motion will prevail; I think that is striking the keynote. All the advertising we can do is not going to compel men to cease the adulteration of honey, either extracted or in the comb, and if the language, as it is shaped in the paper that was read, was to go to the public in that way, I would withdraw the offer of $1,000 for a section 4¼ by 4¼ of honeycomb manufactured and filled with adulterated honey and sealed by human hands.

Prof. Benton—The idea of the bulletin would be to state the various uses of both comb and extracted honey—anything that would educate the people in general. [Motion carried.]

Mr. Abbott—I like this idea, but I want to get at it a little quicker, and before I make a motion let me explain why. I, myself, and many of those who publish papers, write letters by the thousand. If we had a little leaflet of about two pages we could stick one in every letter we write, and all the people would get something about honey without the cost of a nickel. I move that it is sense of this meeting that the Board of Directors of this National Association be requested to prepare such a circular and furnish it free to anybody who will distribute it in any way he or she may see fit.

Mr. Cary moved to amend the motion by restricting the free distribution to the members of the Association.

Prof. Benton—Since this is put forward in connection with the subject of a farmers' bulletin on honey and its uses, I would like to say in making this suggestion I did not wish for a moment to have anyone suppose that was intended to cover the whole ground, but such work as that which has just been suggested is along the same lines, and would be merely supplementary, or my work would be supplementary to that.

Mr. Abbott—Yours would be the higher grade of work. This would be elementary. [Motion carried.]

Mr. Hershiser—There is one method of advertising the use of honey, and doing away with the superstitions of people with reference to bees that I think I can speak of, inasmuch as I was not the originator of it; that is, the methods that are employed in the city of Buffalo in the common schools. For a good many years the seventh grades have been assembled in such numbers as would be convenient to speak to in the lecture-rooms of the Buffalo Society of Natural Science to hear talks upon bees and birds. Supplementary to these the children are required to read a certain book on birds and bees, and then they are given a talk of one hour on these subjects. I have given these talks for a number of years, and previous to last year the talks were very unsatisfactory because the children were expected to go and hear them at some hour outside of school hours. I suggested it should be made a part of the school work, and since then the teachers have accompanied the pupils to the rooms and it has been very satisfactory. These talks give the very best possible opportunity to a person well qualified to speak upon the subject, of showing all about honey and bees. I use just an ordinary hive of bees—an observatory hive—to interest the children. Then I show them a few of the most useful implements—a smoker, bee-veil, a honey-knife, and show them how honey is extracted, and this honey they can buy upon the market is nothing but pure honey taken out of the comb. You also have the opportunity of saying to the people and warning them never to buy honey that has a little slice of comb honey in it, because it is almost sure to be something that is adulterated, although not necessarily so. You can also do a great deal towards showing that this story about honey being manufactured by human ingenuity is also untrue, because you can show them no two combs are alike, and if they were manufactured by machinery they would all be uniform. If you tell them to observe when buying honey, that the combs are all different in some respects, it is an education they will not very easily forget. In making these talks to the seventh grade children, you will observe that it will only take a few years till every family knows about bees. The children go home and say they have had an interesting time—not that *I* can interest them so very much—and the teachers of the pupils are there with them, and they are very much interested, and you will be surprised at the amount of ignorance, or want of knowledge, that these people who are well educated possess. Even the superintendent of schools at Buffalo, who was present on one or two occasions, asked some of the most ridiculous questions.

Mr. Diebold—I would like to suggest in regard to Dr. Miller's proposition, that the General Manager of this Association be empowered to copyright the label, and that would protect the Association in its work, and in order to get money let the Association tax every member 5 cents a colony towards paying the expense.

Mr. Woods (Ill.)—In regard to the expense of advertising, I am satisfied that if the Association gets up a suitable leaflet, nearly every member of the Association can have it published in his own home papers, and the papers around him. That would be one means of spreading it very largely, with no cost. One point we will have to look at, when we give an article to a reporter, is to see that he does not cut out the good things, or make an alteration.

Mr. Dadant offered the following resolution:

Resolved, That the National Bee-Keepers' Association in congress assembled, send their congratulations to the Pure Food Congress for their labors on behalf of pure food, and hope they may be successful in procuring pure food legislation.

The motion was seconded, and carried. Pres. Harris then appointed a committee composed of the following to present the resolution to the Pure Food Congress: Messrs. York, Pressler and Rouse.

(Continued next week.)

The Pennsylvania State Convention.

The first annual convention of the Pennsylvania State Bee-Keepers' Association closed at Harrisburg at 11 p.m., Dec. 7, having been in session since noon of the 6th. The meeting was most profitable and enjoyable.

The first session on Tuesday afternoon was devoted to business. Immediately after this session the officers of the Association, together with Manager France of the National, and Mr. Benton, called upon Gov. Pennypacker. The Governor showed great interest in the industry represented, and asked many questions. The audience lasted full 40 minutes.

On Tuesday evening Pres. Surface, State Economic Zoologist, addressed the meeting, dwelling largely upon the education necessary to put our industry upon a more substantial footing. This address was followed by a paper by Dr. E. F. Phillips, of the University of Pennsylvania, on "Habits of Bees, and Some Misapprehensions".

The Wednesday morning session was taken up entirely by the disease question, which was ably presented by Manager France.

Wednesday afternoon Mr. Pratt spoke upon "Queen-Rearing", Mr. O. C. Fuller on "Bee-Keeping as a Business", and Mr. Gabriel Heister, of Harrisburg, a prominent horticulturist, on "Bees and Horticulture".

Wednesday evening Richard D. Barclay, of the State College, outlined the work which has been done, and which was proposed to do, in apicultural lines at the Pennsylvania State College. Mr. Frank Benton, of the United States Department of Agriculture, presented a most able and interesting paper on "Improvement of Honey-Bees". Rev. W. H. Bender, of Adams County, presented a paper on "Honey-Bearing Flora of Adams County, Pa."

The convention passed resolutions on the death of W. E. Yoder, of Lewisburg; concerning desired legislation; and thanked those who had favored this association during the convention, also the president and secretary for their efforts the past year.

Honey as a Health-Food.—This is a 16-page honey-pamphlet intended to help increase the demand for honey. The first part of it contains a short article on "Honey as Food", written by Dr. C. C. Miller. It tells where to keep honey, how to liquefy it, etc. The last part is devoted to "Honey-Cooking Recipes" and "Remedies Using Honey". It should be widely circulated by those selling honey. The more the people are educated on the value and uses of honey the more honey they will buy.

PRICES, prepaid—Sample copy for a two-cent stamp; 50 copies for 70 cts.; 100 for $1.25; 250 for $2.25; 500 for $4.00; or 1000 for $7.50. Your business card printed *free* at the bottom of the front page on all orders for 100 or more copies. Send all orders to the office of the American Bee Journal.

Contributed Special Articles

The Problem of Wintering Bees.

BY ALLEN LATHAM.

THE first winter is a sure source of dread for the beginner in bee-keeping, while the expert is always glad to see spring give him warrant for his confidence; and I miss my guess this December if many an old hand at bee-keeping is not on "the anxious seat" now, though he had thought a year ago that he had solved this tough problem of getting bees safely over the winter. The awful loss in bees last winter doubtless caused every apiarist in the North to study the subject anew, and to use unusual care in preparing his bees for this present winter.

The purpose of this article is to throw out one or two warnings which may save the colonies of some bee-keepers, who, in their anxiety to guard against loss, have erred in their preparation. I have been led to the conclusion that the great loss of bees last winter was due to lack of air more than to any other cause, and wish to ask the kind attention of the American Bee Journal readers to a few facts and observations.

That my words may have greater weight, allow me to say that I am now in my 21st year in bee-keeping, and ought to be allowed to vote; that I have had remarkable success in the wintering of bees; that last winter, while all about me whole apiaries were wiped out, I lost but 2 out of 38 (and it should be said that these 2 colonies died from starvation).

There are a few well-formulated rules for wintering which are observed by all who use ordinary care—namely, keep hives dry, give plenty of food, and protect from cold. Yet with all these rules well kept great loss will come from a winter like that of 1903-4. We must add to these rules this one: Allow plenty of fresh air.

I am talking about out-of-doors wintering. I know that cellar-winterers advocate fresh air, but have seldom known those who winter bees outdoors to have much to say about the supply of air, and I am confident that the vast majority seek to shut out the air rather than to let it in.

Bee-keepers in New England were among the heavy losers last winter, and those with whom I have talked give this description of the condition in spring of the dead colonies: The spaces between the combs were clogged with dead bees, frames and combs were sticky and foul with excrement, and the whole interior of the hive was dripping with damp mold. The living colonies were, most of them, in an equally deplorable condition except that above the ramparts of dead bees were a handful of brave but weak survivors.

I had a few colonies which were not unlike those last described, and in every case they were colonies which I had molly-coddled, or which had lain under snow too long. Every one of my colonies which was allowed its regular summer entrance, came through with clean, sweet combs, strong bees, and a spirit for conquest.

Last winter my 38 colonies were disposed as follows: Three in my seashore cottage in the full blast of all the winds that blow, with entrances 1½-inch holes three to the colony; 5 on farms about Provincetown, Mass.; 3 on a farm in Lancaster, Mass., with entrances the width of the hive and ⅜ deep; 10 on farms in Norwich, Conn., with entrances the width of the hive and from ⅜ to ⅞ inch deep; 2 glass observatory hives in a north window; 17 in my yard at home with entrances of all sorts.

The bees at the seashore were all alive and flourishing when my family and I arrived there for our summer stay. They had had no care since the preceding August, yet were all alive, while we are told that 90 percent of the bees along the coast died.

My bees in Lancaster wintered poorly because they were covered with snow too long. The bees on farms in Norwich were set on high stone walls where they got the good, fresh air, and they wintered well except two starved from lack of stores due to my own carelessness. Of the bees in my home yard, the colony which showed all along a fine state of health had an entrance 12 inches long and ⅞ of an inch deep. This entrance was open all the time except occasionally, when the cold went way below zero; I either threw dry snow lightly over the entrance or else pushed a porous cloth into the entrance. This was done more to conserve heat than otherwise, for I feared that the bees might consume all their stores in trying to keep warm. At no time from fall to spring could more than a bare sprinkling of dead bees be seen on the bottom of the hive. All winter long the bees occupied at least seven of the spaces between the combs.

My various observations of last winter have led me to leave all my hives this winter with ample entrances, in several cases an entrance the equivalent of 12 square inches. I do not advocate so large an entrance, but shall sacrifice a few colonies this winter, if necessary, to find out the effects of such an entrance. I am watching closely, and thus far all is well. One can look into the well-lighted hive and see the bees clustered in perfect repose about the bottom-bars of the frames. Such an entrance is all right for ordinary winter weather, but may cause trouble when the temperature falls to 10 below zero or colder.

Though I do not advocate so extreme an entrance as last described, I do most assuredly advocate one which has the equivalent of at least 5 (five) square inches. If there is any reader of these lines who has hive-entrances smaller than that let him worry about his bees. That size of entrance is needed to furnish the circulation of air sufficient to carry off the moisture given out by the bees, and will go far towards preventing moldy combs and sick bees.

Right here let me say that bees which winter with dry, clean combs do not spring dwindle to any serious extent.

It is desirable that I state that my hives are well protected; that the combs run crosswise of the hive; that the hives face the south; that every colony allowed a big entrance is a big colony.

There are conditions which will permit good wintering with small hive-entrances, and they are these: A mild winter in which bees can get frequent flights and can ventilate their hive themselves, or an arrangement for a slow upward circulation through a very porous cushion over the frames, in which case the regular cover of the hive is left off in the wintering-case. If the winter is cold, and there is no opportunity for the escape of the dampness of the hive, the bees become uneasy, their abdomens become distended with moisture, the weaker ones die and make smaller the entrance already too small, the stronger bees become weak, and unless spring comes to the rescue the colony assuredly dies.

Let your bees have *air*. New London Co., Conn.

"**The Hum of the Bees** in the Apple-Tree Bloom" is the name of the finest bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us *one new* yearly subscription to the American Bee Journal at $1.00.

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Some Facts About Honey and Bees.—This is the subject of an article written by Mr. J. E. Johnson, and published on pages 581-82 of the American Bee Journal for Aug. 25, 1904. We have republished it in 4-page leaflet form for general distribution, and furnish it, postpaid, at 35 cents per 100 copies. Send all orders to the office of the American Bee Journal.

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Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

OUR TOIL DOTH SWEETEN OTHERS

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

The Women Members of the National Bee-Keepers' Association.

ARIZONA.

Mrs. Ralph Bulkley.

CALIFORNIA.

Mrs. Mary E. Avery.
Mrs. I. A. Chantry.
Mrs. D. A. Higgins.
Miss Maud Sanders—120 cols.
Mary L. Small.
Mrs. Louis Wegener.
Nellie M. White.
Mrs. Rudd.

COLORADO.

Mrs. M. A. Booth.
Mrs. L. J. Brock.
Susie R. Cook.
Emma E. Evans.
Caroline Lindenmeier.
Mary C. Porter.
Elizabeth F. Read.

DISTRICT OF COLUMBIA.

Mrs. Kate Barrett.

IDAHO.

Mrs. S. A. Mitchell.
Mrs. Bertha Morris.
Mrs. A. A. Paul—100 cols., and 4000 lbs. comb.
Miss Bertha Petersen.
Miss Ida Schenck—20 cols., and 175 lbs. comb.

ILLINOIS.

Mrs. H. W. Bartrum.
Mrs. Aaron Coppin—175 cols.; 2000 lbs. comb, and 500 lbs. extracted.
Mrs. John J. Glessner.
Mrs. W. H. Horstmann.
Miss L. C. Kennedy—72 cols., and 2500 lbs. comb.
Mrs. Herman F. Moore.
Mrs. G. A. Schmidt.
Mrs. N. L. Stow.
Mrs. Anna Weckerle—28 cols.; 400 lbs. comb, and 600 lbs. extracted.
Emma M. Wilson.
Mrs. George W. York.
Miss Minnie Yueill—11 cols., and 150 lbs. comb.
Mrs. F. X. Arnold.

INDIANA.

Kate V. Austin.
Mrs. F. A. Proper.

IOWA.

Mrs. Clara West Evans—200 cols., and 3500 lbs. comb.
Mrs. M. J. Finson.

KANSAS.

Mrs. S. M. Roby—50 cols.
Mrs. J. D. Smith.

MICHIGAN.

Lurinda Cox.

MINNESOTA.

Mrs. J. M. Downer.
Mrs. E. D. Hance.
Mrs. W. B. Hutchinson—27 cols.; 500 lbs. comb, and 700 lbs. extracted.
Mrs. J. B. Thompson.
Mrs. W. S. Wingate.

MISSOURI.

Jane Coffelt.

NEW YORK.

Mrs. Emma Boyes.
Mrs. O. L. Hershiser.
Mrs. G. B. Back.
Jessie E. Marks.
Mrs. D. C. Southerland—12 cols., and 470 lbs. comb.

NORTH CAROLINA.

Miss Delia Hyatt—85 cols., and 3000 lbs. comb.

OHIO.

Mrs. M. A. Ray—37 cols., and 268 lbs. comb.

OREGON.

Mrs. Nancy Scott—70 cols., and 3000 lbs. comb.

PENNSYLVANIA.

Mrs. J. C. Hubler.
Miss Ellen N. Cooke.

SOUTH DAKOTA.

Mrs. J. M. Donner—5 cols., and 45 lbs. comb.

TEXAS.

Miss Helen Buller.
Miss Meta Hillje.

UTAH.

Mrs. L. S. Coleman.
Mrs. J. E. Dillman.
Mrs. K. J. Empey—40 cols., and 3600 lbs. extracted.
Mrs. H. Halgate.
Mary Longston.
Mrs. Mary Vanduine.
Mary Voigt.
Mrs. R. T. Rhees.

WISCONSIN.

Mrs. Paul Barrett—34 cols., and 1000 lbs. comb.
Mrs. G. Berenschot—27 cols., and 250 lbs. comb.
Mrs. Lena Bol.
Miss Mathilde Candler.
Mrs. Kate Fleming—140 cols., and 2500 lbs. comb.
Mrs. W. J. Hillman—30 cols.; 100 lbs. comb, and 3000 lbs. extracted.
Mrs. S. L. Kepler.
Mrs. Minnie Mallory.
Miss Fannie Newman.
Mrs. W. J. Pickard—260 cols., and 37,000 lbs. extracted.
Mrs. Ada Boggs.
Mrs. Jennie Towle.
Martha Van Woert.
Emily White.
Mrs. J. D. Williams—28 cols., and 150 lbs. comb.

Comparing the foregoing with last year's report it will be seen that there has been a gain of 26 in the number of sisters, the present number being 83. But although the number is greater this year, they haven't done so well at reporting; only 22 reported this year as against 26 last.

Miss Hyatt still stands by her lone self as the representative of North Carolina, with never a brother rallying to her aid.

Wisconsin carries the banner for members, with 15; and Illinois is a close second, with 13 members.

Mrs. W. J. Pickard, of Wisconsin, stands conspicuous, with the largest number of colonies (260)—the largest crop (37,000 pounds), and the largest average per colony (142 pounds).

It would be interesting if Mrs. Pickard would tell us something about getting that magnificent crop; how many colonies in one apiary, how much of the work she has done herself, and how much help she has had, etc.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

CARNIOLAN HISTORIC HIVE-PAINTING.

That's a queer conceit of the people of Carniola to paint Bible history and domestic history on their hives. Such a custom shows that bees are looked to with something quite the opposite of indifference. Think I would much rather contemplate Samson at the lion carcass on a hive than (as with us) read "Chew Doorty Plug" all over a barn—effigy of the plug thrown in. The hornets driving out the Canaanites, and Jonathan chasing the Philistines—eating, meantime, at the "gorb" of honey he had swiped up with his rod, would make good hive scenes. "Lest thou be filled therewith and vomit", it might better be imagined than painted, I suppose. (Page 765.)

And we would hardly want any but a first-class artist to try his hand at The Risen Christ Eating the Honey-Comb. Dropping to domestic scenes, the Honey-Moon would furnish quite a variety of pictures not above the youthful artist. The Honey Ache, and the Two Young Queens, and Early Rising (lark, bee and sun,) and Industry, mottoed with "Keep a hoeing ob the corn, Honey", would all be available. Think my first trial would be just a good-sized rose, with a little bee, and a little bird, and a little youth hovering over, and the motto:

> "But de birds and de bees, and we all ob us knows
> Dat we's jes hangin' round for to look at my rose".

A HELD BEE AND ITS EATING.

Prof. Cook finds that a bee, when held a prisoner in the fingers, will always take honey. Reminds me somewhat of the mouse which, when made a prisoner, often dies of fright and cold in a few hours; yet it doesn't collapse altogether; it usually nibbles up everything nibbleable it can get at. A bee, if held a prisoner in such a way that it can worry, will die in about an hour; but, it seems, when held so that violent hustling about is impossible it will eat. I should hardly have expected it to turn out so. I still think, if the experiment were tried often enough with all sorts of bees in all sorts of circumstances, such exceptions would occur. Page 758.

MIGRATORY BEE-KEEPING ON RIVERS.

Rafts and flatboats on rivers would be more used to set apiaries on if the great rivers of the bee's world only ran the other way. As it is, the season travels one way while the hives would have to travel the other—unless a tug is hired, and that is pretty expensive; and the tug is not always to be had when wanted. Page 765.

TEMPORARY APIARY FENCE.

For a small apiary the Kilgore arrangement for a temporary fence around it during winter is so moderate in cost, and so evidently excellent, that one wonders why it is not in general use. Never mind, Mr. K., the bicycle didn't get into general use until a great many years after it was invented. Different showing 20 years hence, maybe. I'm not sure but eight more boards, making a center division from north to south, would pay as well as the outsides. But many brethren would demur at outer cases for the hives, and an outer case for the whole apiary, too. It would look to them as a needless duplication. Page 777.

TIN-FOIL-BASE COMB FOUNDATION.

I had a frame or two of that Detwiler foundation with tin-foil in the middle. Hardly know what became of it. Probably went to ruin with some colony that the worms cleaned out. The bees did not peel the tin bare badly enough to be prohibitory if one very much wanted to use it. An attempt to sustain a patent on it now would be quite an outrage. Page 771.

HILARITY RATHER THAN WRATH.

If a cross-roads local newspaper suggests that folks leave off taking the Chicago Tribune or the New York Journal in order to make room for itself, probably it would promote hilarity rather than wrath in the offices named. Similarly I think our leading apicultural journals ought to be able to smile without much bitterness at the inflated self-appreciation of the small fry. Page 772.

GARDENING FOR "LADY OF THE HOUSE".

Leave gardening for the lady of the house to superintend, eh? Very good. Very good indeed—until we hear from the lady of the house. Page 775.

BACKSLIDING TO BULK COMB HONEY.

Where an old scientific apiculturist and progressive man like Mr. Stachelhausen takes to bulk comb exclusively—and gets 20,000 pounds of it—the "antis" have a chance to wonder who'll backslide next. Page 775.

ISN'T IT A BASSWOOD TREE?

O yes—must fling a parting club—that pretty tree on the outside of No. 46 is no more a basswood than the portrait in the other corner is a picture of me. Pictures changed in the cradle, somehow. Why, just see how small and thick the foliage is—and the objects below are proof that it is not distance that makes the leaves so small.—[We'll ask Mr. Blair for the proof. He called it a basswood in full bloom when sending us the picture.—Editor.]

Ask Doctor Miller ??

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Uncapping and Returning Drone-Brood.

Is it safe to uncap drone-brood and then put it back in the hive for the bees to clean the cells? Wisconsin.

Answer.—Entirely safe; but you can save the bees the labor of cleaning out the cells, and also save the considerable amount of food fed to the larvæ if you cut out each patch of drone-comb and put in its place a patch of worker-comb.

◆

Size of Frame for Extracted Honey—Shipping-Case Sizes—Best Hive for Tennessee.

1. What size of frame is the most practical for extracted honey production? How many to the hive?
2. What are the sizes of shipping-cases now in use?
3. Give the dimensions of the best hive, in your judgment, to use in middle Tennessee. Tennessee.

Answers.—1. That's a tough one. With the right man to handle it in a good locality, almost any frame may be expected to give good results; but for extracted honey I should hesitate between the Langstroth frame and something larger; perhaps settling on the Langstroth because more the fashion. Ten frames would be the least for the lower story, and nine in the extracting supers if they are the same size as the brood-chamber. If a business is to be made of it, there are some advantages in having shallower frames for extracting supers.

2. There is no one size, as you will see by consulting the manufacturers' or dealers' catalogs. Among the sizes in most common use, I think, are those holding 12 sections and those holding 24 sections. The publishers of this journal having been in the supply business not so very long ago, they can answer this question with more certainty than I. [We would refer the questioner to the catalogs of our advertisers.—Editor.]

3. Your first question being practically the same question with regard to hives for extracted honey, this probably refers to hives for comb honey. If you intend to give full time and attention to the business, the 8-frame dovetail ought to suit you; if the bees are to be left more to their own devices, the 10-frame will be better.

◆

Red Clover Queens—Sainfoin—Comb-Honey Hives—Late Queen Introducing.

1. I have 17 colonies of black bees which are very easily handled. As there is more red clover in my locality than white, would it pay me to get red clover Italian queens, or the so-called long-tongued red clover queens?
2. Which are the better, Italian 3 or 5 banded bees?
3. Do yon think sainfoin would grow in Tennessee? If so, where can I get the seed? What will it cost? How

much seed per acre? When sown? Will it bloom the first year?

4. I am using the 8 and 10 frame hive with Hoffman brood-frames and Danzenbaker super. I am after comb honey, and thought I would try 10 Danzenbaker hives next season. What do you think of them? Are they, or any other hive, better than the one I am now using?

5. Is it now too late to introduce queens?

TENNESSEE.

ANSWERS.—1. The probability is that it would pay you. At any rate, it will cost very little to try one queen. Then rear a few queens from her, and see how their colonies compare in results with your blacks.

2. The 3-banders are not all alike, and there is likely to be still greater variation in the 5-banders. One of the best of either will give good results.

3. It is well worth the trial. See article by C. P. Dadant, page 790. It is a perennial, blooming the second and succeeding years. You can probably get the seed of any seed-dealer. I don't know the cost, nor amount of seed per acre, but you can hardly be far out of the way to follow the time and amount of sowing other clovers in your locality. Possibly some one who has had experience may tell us more about it.

4. The little experience I had with Danzenbaker hives did not impress me very favorably. I very much prefer the dovetail with Miller frames to either the Danzenbaker or Hoffman.

5. No, not in Tennessee; but it is generally more convenient to wait till next season, and you would hardly gain anything by introducing now.

◆

Clipping Queens—Sugar-Syrup Winter Stores—Shaking Swarms—Requeening Colonies—Wiring Frames—Slotted Sections.

1. What time next spring would you clip queens?

2. How would you start, and how do you handle them?

3. I find a dampness against the top of the hive. Should the bees have top ventilation, or will the dampness not do any harm?

4. Do you think bees will winter all right on sugar syrup when on the summer stands? They have a flight about once a week.

5. Will extra-thin section foundation do for brood-frames if I put in splits about 3 inches apart?

6. Will it make any difference if in wiring frames I use tinned wire double the size usually used?

7. I find in requeening a colony that to find the old queen I break some of the honey-cells and start robbing. How do you prevent it?

8. I don't want any swarming next year. How will I know when to shake a swarm? If I wait until the day before they swarm they may swarm the day before I expect them.

9. Is honey that has candied in the comb good to feed bees in winter?

10. Will candied honey do for spring feeding? If so, how do you prepare it for use?

11. I have 12 colonies down in the country that I expect to bring home. Should I want to requeen them, what is the earliest that I can get queens next spring?

12. Do the open sides in sections help the bees any?

RICHMOND, VA.

ANSWERS.—1. Any time when it is warm enough for bees to fly freely; only not when they take their first cleansing flight. On that day there's some danger the bees might be unkind to the queen after you return her.

2. With the thumb and finger seize the queen by the wings, then hold her by the thumb and fingers of the left hand, head to the left, tail to the right, holding her by the thorax—perhaps you would call it by the shoulders. Be careful not to squeeze her by the abdomen or soft part. With a pair of small scissors (I use common pocket scissors that I carry in my trousers pocket all the time), cut off both wings on one side. Cut off half or more of the wings. Then put her back on ths comb or on the top-bar. Most likely, instead of running down, she'll run up on your hand. Take a leaf, chip, or somethinu of the sort, let her run on that, and then lay it on the frames. She'll do the rest.

3. If there is enough dampness so it will fall in drops on the bees it will do harm. Give upward ventilation, or else cover something over the top to keep it warm. Then the dampness will not settle on it.

4. Yes.

5. I don't know; thin might do; I'd be afraid to try extra-thin only on a small scale.

6. It would probably answer, only it would be just a little more in the way of the bees.

7. I'm afraid I don't fully understand; what do you break the honey for? The only thing I can think of is that your combs are a little uneven, with brace-combs from one to the other, and this can be avoided by keeping the brace-combs cut away whenever you take out the frames. But even then, robbing might be started when you open a hive if honey is not coming in. Open the hive in the evening, as soon as robber-bees have stopped flying.

8. Every week or 10 days look for queen-cells, and shake as soon as you find them with eggs or larvæ in them.

9. Yes, only there's waste in it, for the bees will reject the solid part.

10. Melt it by heating, adding a little water. It's all right for spring feeding.

12. Write to those that advertise early queens and ask how early. Those down South are the earliest.

12. I doubt that openings at the sides of sections help.

◆

Feeding Bees Up for Winter Stores.

We have continued fine, warm weather. Bees are on the wing all the time. Is this good or bad for them? How would it do to feed them? There are no other bees (to amount to anything) in the neighborhood. Would it pay to feed some each day to keep the amount of stores already in the hives? Tell me what effect it would have on them now, and in the spring. Would it pay? They are on the summer stands, and fixed nice and dry for winter.

What I want to know is, Would it be a good scheme to keep them fed up full this fall on sugar syrup? And how would it do to let them have rye-meal also?

NEBRASKA.

ANSWER.—The continuous good weather, allowing the bees to fly daily, is all right, although they will use a little more food. Don't think of feeding them syrup or meal, unless they have so little that you are afraid they will not pull through the winter. If they are short of stores don't fill them up with small daily feeds, but feed as rapidly as possible. If you do as you suggest, you are likely to start them to brood-rearing, and then have Jack Frost catch them with a lot of brood that will only be a damage to them. Let them severely alone—that's the best care you can give them now.

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Reports and Experiences

Baby Nuclei—An Explanation.

Once or twice I have seen references in the American Bee Journal regarding the giving of Mr. Pharr his due, or not giving him his due, for the invention of the baby nuclei for mating queens. As my name has been mentioned in the matter, please allow me a little space for an explanation.

Two years ago Mr. C. B. Bankston, who, I believe, was in partnership with Mr. Pharr, wrote me an article describing this plan of getting queens mated. Mr. Bankston's penmanship and composition were none of the best, and I may have been a little thick-headed, but be that as it may, I failed to catch the spirit of the invention. I could not see where the advantages came in. I wrote to Mr. Bankston about this—that I could not "see the point". He referred me to Mr. W. H. Laws, saying that Mr. Laws had been using the plan for a year, and could tell me all about it. I wrote Mr. Laws, and he replied that he had used it, but he preferred to use it another year before describing it. In the meantime, Mr. Bankston sent an article to the American Bee-Keeper, in which he described the plan. That paper published it, and still I could not "catch on" to its advantages. A year ago Mr. Laws sent me one of the nuclei, and a complete description of the whole plan, and I then understood it clearly, and immediately saw its great value. It was published in the Review with an illustration. In this article Mr. Laws said it was the first time that the plan had been published, except in an article that had appeared a year previous in the American Bee-Keeper.

When the article appeared in the Review, Mr. Bankston wrote me that he thought he had not been fairly treated; that he had sent me an article a year before and I had not published it, and now I had published one from Mr. Laws, in which he had been given the whole credit. I wrote and reminded him how he had referred me to Mr. Laws, and told him that if he thought he had not been fairly treated, I should be only too glad to make it right in the Review. I have never heard from him since.

In a few weeks Mr. Pharr wrote and made almost the same complaint that

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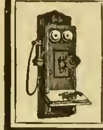

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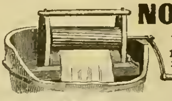

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GUS DITTMER, Augusta, Wis.

Mr. Bankston had made, viz., that *he* was the inventor of the system, while Mr. Laws had been given the credit for it. I wrote and explained to him the same as I had to Mr. Bankston, but nothing further was heard from him. Soon after I saw his complaint in the American Bee Journal.

Now, I have no disposition whatever to rob any man of any glory or honor that is his due. So far as I know Mr. Bankston or Mr. Pharr, or, perhaps both of them, originated the baby-nuclei plan for fertilizing queens, but they did not describe it in such a manner that the public understood its advantages. Mr. Laws described it so that he was understood, although he admitted that it had been described before. Perhaps he ought to have mentioned names, although I did not think much about this point at the time, as I had been referred to him by the men who claim to have invented it.

I don't think that there has been any disposition on the part of any one to rob Mr. Pharr of his honors. I know there has been no such intention upon my part, and if there has been the appearance of that in the Review, I beg his pardon for the part that I have played, and take pleasure in making this public acknowledgement.

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F. W. MORGAN.

[No definite answer can be made to your question, as everything depends upon the locality and the honey-plant. As a rule, we may say that basswoods will yield a larger amount of honey per acre than any other plant, unless it be the logwood of Jamaica. In a general way we may say that honey-yielding *trees* will yield more honey per acre than any shrubbery or plant

In some localities 1000 acres might take care of 100 colonies; but, as a rule, we may figure that it will require much more than this. As a general thing bees do not fly much further than a mile and a half from the home yard. This would make a circle of three miles across, or 4521 acres. If we allow liberally for wooded lands, cultivated lands and dwelling-houses, probably we should have to cut down this amount by at least a half, probably a little more, so that, in the height of the honey season, taking clover and basswood as they may come in, 100 colonies would not have access to much more than 2000 acres. This would make an aggregate of 20 acres per colony.

If we turn to the alfalfa regions we shall probably find a much smaller

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Those who are in arrears on their Bee Journal subscription, and desire to take advantage of our liberal American Farmer offer, will need to pay all that would be due on their subscription to the end of this month (December) and also $1.00 for 1905.

Those who are now paid in advance extending into 1905, can send us $1.00 for another year, and also have the American Farmer for one year. Address all orders to

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acreage required to take care of 100 colonies. Just what this acreage may be I could not say, and therefore leave it to some of our alfalfa-honey producers to give us any available data they may have.

This is an interesting problem, and it has some practical bearing, because this question of overstocking has come to be a very serious one. In the alfalfa localities it can be definitely known how many thousand acres there are of this plant for a range of 1½ miles. One can, therefore, determine pretty closely how many colonies can work profitably on a given number of acres of alfalfa.—EDITOR.] — Gleanings in Bee Culture.

Bee-Sting Poison an Article of Commerce.

Can you tell me anything concerning the formic acid which is said to be collected by bottling bees, agitating them and killing them with alcohol? This product is said to be sold to eastern druggists at a good price. I should like to get the names of such purchasers. This bee-sting business looks to me like a hoax, as I have been personally acquainted with parties who have been stung many times, and still have the rheumatism; but as all such fads have a day it may answer to sell.

W. W. RICH.

[The active principle of the bee-sting poison, whatever that may be, said to be formic acid, is used largely by the homeopathic school of medicines. Some years ago we used to do quite a little business pulling bee-stings by the thousand. We have supplied a New York firm with stings in lots of 10,000, the same being dipped in a small vial of sugar of milk as fast as the stings were removed. At other times we have taken bees in lots of five or ten pounds, shaken them up until they became thoroughly angry, and then immediately dumped them into a large vial of alcohol. But because the pulling of the stings poisoned the operator pulling them, causing a swelling of the face, we refused to accept further orders of the kind.

We have had some reports, apparently showing quite remarkable cures where one was suffering from rheumatism after he had been stung in the affected parts. We have had a good many other reports from those who have tested the stings and could see no benefit whatever.]—Gleanings in Bee Culture.

Moving an Apiary Less than a Mile.

I see so many questions asked in regard to moving bees that I should like to give my experience in that line. While the requirements are simple, yet some of them are frequently overlooked, and a failure is the result. In the last seven years I have moved five whole apiaries for myself and others, the distance in every case being under a mile. Two of the apiaries were my own, consisting of 100 colonies, and were moved a little over 50 yards, in warm weather. In all this number, less than a gallon of bees went back to the old stands.

I thing March is the best month in the year for moving an apiary. If you have work of this kind to do, put it off until winter if you can. If you are obliged to change your location in warm weather, leave the hive-entrances open while on the road. This may seem like a dangerous matter to one who has never tried it; but if the road isn't too rough it is perfectly safe. Take a small load, not over a dozen colonies. Let one man watch the hives with a lighted smoker, and another do the driving. You have no idea how easy it is to smother bees by shutting them up in warm weather until you have killed a few colonies that way. If the temperature is below 40 degrees it will be safer and easier to shut the bees in.

Don't leave anything but the bare ground at the old location. If the distance is under a mile, a large number of bees will usually go back to look around; but if they have marked the new home properly they will always return. If they are to be moved in warm weather it should be done very late in the afternoon, so they will have no chance to fly until the next day. If it is done in cool weather, leave them shut up until sundown. Put them on the new stands; leave them alone until some of them begin to fly, then go around and give every one a good smoking so they will know there is something doing. Then set up a board in front of each one so that a bee can not easily get out without bumping its head. I believe this is the most important part of the work, but it seems such a little thing that it is often neglected. It causes them to notice that there has been a change, and to mark the spot before leaving it. Many of them will go back to the old stand; and if there is a hive there, or anything that looks like one, they will enter it and forget all about the new location. If there is none they seem to

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remember that there is one more chance, and that is the place they have just come from.—C. F. BENDER, in Gleanings in Bee Culture.

CONVENTION NOTICES.

New York.—A series of bee-keepers' meetings have been arranged for in this State, as follows: Canandaigua, Jan. 9, 10; Auburn, Jan. 12; Syracuse, Jan. 15; Watertown, Jan. 17, 18; Romulus, Jan. 11; Cortland, Jan. 13; Fulton, Jan. 16; Amsterdam, Jan. 19. Mr. N. E. France. the general manager of the National Bee-Keepers' Association, has been engaged to address the meetings, by the State Department of Agriculture, through the Bureau of Farmers' Institutes, F. E. Dawley, Director. The convention at Watertown, Jan. 18, will be the meeting of the State Association, at which many of the progressive bee-keepers of this and adjoining States are expected to be present and take part in the discussions.

C. A. HOWARD, Sec. W. F. MARKS, Pres.

California.—The annual convention of the California State Bee-Keepers' Association will be held in the assembly room of the Chamber of Commerce, at Los Angeles, Jan. 2 and 3, 1905. The convention will be called to order at 1:30 p.m., Jan. 2. Each member is requested to prepare something for consideration, and all bee-keepers are invited to attend.

T. O. ANDREWS, Pres.
J. F. MCINTYRE, Sec.

Kansas.—The annual meeting of the Kansas State Bee-Keepers' Association will be held at Topeka, Jan. 10 and 11, 1905. All persons interested in bees are urged to be present.

Topeka, Kans. O. A. Keene, Sec.

Wisconsin.—The Wisconsin State Bee-Keepers' Association will meet in the Capitol Building, at Madison, Feb. 1 and 2, 1905. All bee-keepers are invited to attend.

Augusta, Wis. GUS DITTMER, Sec.

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Honey and Beeswax

CHICAGO, Dec. 7.—The market is well supplied with all kinds of honey; the demand is of a light nature. Fancy comb honey brings 14c, but quality as well as appearance is necessary; No. 1 sells at 12½@13c; off grades difficult to move at 1@3c less. Extracted, choice white, 7@7½c; amber, 6@7c, with off grades about 5½c per pound. Beeswax, 30c.

R. A. BURNETT & Co.

NEW YORK, Dec. 7.—Receipts of late have been quite heavy, and while there has been a fair demand, it has not been up to former years and stocks are somewhat accumulating, consequently prices show a tendency to decline, and in large lots quotation prices as a rule are shaded. We quote fancy white at 14@15c; No. 1 white at 12@13c; amber, 11c; buckwheat, 10c. Extracted in fair demand at 6@6½c for white clover; 5½c for buckwheat; 50@60c per gallon for Southern, according to quality. Beeswax firm at from 28@29c.

HILDRETH & SEGELKEN.

PHILADELPHIA, Dec. 8.—Honey has not been quite so active in the last 10 days, but more demand is expected soon, as more honey is sold at the present time than at any other season of the year. We quote: Fancy white, 15@16c; No. 1, 13@14c; amber, 11@12c. Extracted, white, 7@8 cents; amber, 6@7c. Beeswax sells quick, 25@26c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

BOSTON, Nov. 19.—Recent heavy arrivals together with very low quotations from some other markets have had a tendency to weaken our market. We quote fancy No. 1, 15@16c; No. 2, 14c, with ample stocks; absolutely no call for buckwheat. Extracted honey, 6@8c.

BLAKE, SCOTT & LEE.

CINCINNATI, Dec. 10.—The demand for honey at the present time is not good, owing to the approach of the holidays, when too many sweets are found on the market. On the other hand, the trade is well supplied with comb honey, that will require a considersble length of time to be consumed. We are offering white clover extracted honey in barrels and cans at 6½@8½ cents; amber, 5¾@6½c. Fancy comb honey, 12½@14c. Beeswax, 29@30c.

THE FRED W. MUTH CO.

ALBANY, N.Y., Nov. 9.—The crop of honey is turning out to be larger than estimated, and prices are softening, favoring the buyer. We quote fancy white, 15c; A No. 1, 14c; No. 1, 13c; mixed, 11@12c; buckwheat, best, 13c; average run, 11@12c. Extracted, buckwheat, 6c; white clover, 6½c; mixed, 6c. Beeswax, 29@30c.

H. R. WRIGHT.

KANSAS CITY, Sept. 22.—Market on comb honey is quite active at $2.75 per case for fancy white stock. Extracted rather slow at 6½@7c. We look for the demand on extracted to pick up considerably with cooler weather. Beeswax in good demand at 30c per pound.

C. C. CLEMONS & Co.

CINCINNATI, O., Dec. 7.—Comb honey is now coming in more freely, and prices if anything have moderated a little. The sales made and prices obtained were for No. 1 fancy water-white comb, 12@13½c; single cases, 14c. Extracted is sold as follows: White clover, in barrels, 6½c; in cans, 7½@8c; amber, in barrels, 5¼@5½c; in cans, 6@6½c. Beeswax, 27c.

C. H. W. WEBER

SAN FRANCISCO, Dec. 7.—White comb. 1-lb. sections, 11½@12½c; amber, 9@11c. Extracted white, 6@6½ cents; light amber, 4½@5½c; amber, 3¾@4¼c; dark amber, 3@3½c. Beeswax, good to choice, light, 29@30c; dark, 27@28c.

The German Steamer Memphis, sailing Saturday, carried 225 cases extracted honey of common quality, such as is used in the manufacture of honey cake. The local demand is light. In some instances concessions are being made to effect sales.

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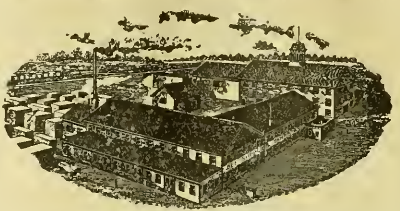

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American Bee Journal

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44th Year. CHICAGO, ILL., DEC. 29, 1904. No. 52.

SOME ST. LOUIS NATIONAL CONVENTION SPEAKERS,

(WHOSE ADDRESSES ARE GIVEN THIS WEEK).

(Courtesy Gleanings in Bee-Culture.)

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W. Z. HUTCHINSON.

JAS. U. HARRIS.

Courtesy Gleanings in Bee-Culture.)

DR. E. N. EATON.

ABRAM TITOFF.

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GUS DITTMER, Augusta, Wis.

CONVENTION NOTICES.

Kansas.—The annual meeting of the Kansas State Bee-Keepers' Association will be held at Topeka, Jan. 10 and 11, 1905. All persons interested in bees are urged to be present.
Topeka, Kans. O. A. Keene, Sec.

Wisconsin.—The Wisconsin State Bee-Keepers' Association will meet in the Supervisor's Room in the Court House, at Madison, Feb. 1, 2, 1905. All bee-keepers are invited to attend.
Augusta, Wis. Gus Dittmer, Sec.

New York.—The Jefferson County Bee-Keepers' Society and New York State Association will hold their meeting in the City Hall, Watertown, N. Y., Jan. 17 and 18, 1905. The general manager, N. E. France, and other prominent bee-keepers, are expected to speak.
Black River, N.Y. George B. Howe, Sec.

New York.—A bee-keepers' institute will be held Jan. 9 and 10, 1905, in Canandaigua, N. Y., under the auspices of the Bureau of Farmers' Institutes. Mr. N. E. France has been engaged by the Department of Agriculture as speaker. There will be two sessions each day. The business of the Ontario County Bee-Keepers' Association will be transacted during a part of these meetings. F. Greiner, Sec.
Naples, N. Y.

California.—The annual convention of the California State Bee-Keepers' Association will be held in the assembly room of the Chamber of Commerce, at Los Angeles, Jan. 2 and 3, 1905. The convention will be called to order at 1:30 p.m., Jan. 2. Each member is requested to prepare something for consideration, and all bee-keepers are invited to attend.
T. O. Andrews, Pres.
J. F. McIntyre, Sec.

New York.—A bee-keepers' institute, under the auspices of the Bureau of Farmers' Institutes of the State of New York, will be held at Fulton, N.Y., Monday, Jan. 16, 1905. Mr. N. E. France has been engaged by the Department of Agriculture, as speaker. The annual business meeting of the Oswego County Bee-Keepers' Association will be held at the same time and place. Chas. B. Allen, Sec.,
Central Square, N. Y.
Mortimer Stevens, Pres.

New York.—The Fulton and Montgomery Counties Bee-Keepers' Society will hold the next meeting at Amsterdam, N. Y., Thursday, Jan. 19, 1905, in connection with a bee-keepers' institute. Arrangements have been made with F. E. Dawley, Chief of the Bureau of Institutes, to furnish Mr. N. E. France, General Manager of the National Association, as the principal speaker, and all are cordially invited to come. This will also be the annual business meeting of the society. T. I. Dugdale, Sec.
West Galway, N. Y.

Nebraska.—The annual meeting of the Nebraska Bee-Keepers' Association will be held at the Experiment Station at Lincoln, on Monday, Jan. 16, 1905, at 2 p.m. Will you be there and favor us with a paper along the lines of bee-keeping in which you are particularly interested? It is hoped that Ernest R. Root will be present for a good talk. Headquarters will be at The Windsor Hotel, where cheap rates have been secured. This will be one of the first meetings in the weeks' series; let us have a good one. L. D. Stilson, Sec., York, Nebr.
E. Whitcomb, Pres.

New York.—A series of bee-keepers' meetings have been arranged for in this State, as follows: Canandaigua, Jan. 9, 10; Auburn, Jan. 12; Syracuse, Jan. 15; Watertown, Jan. 17, 18; Romulus, Jan. 11; Cortland, Jan. 13; Fulton, Jan. 16; Amsterdam, Jan. 19. Mr. N. E. France, the general manager of the National Bee-Keepers' Association, has been engaged to address the meetings, by the State Department of Agriculture, through the Bureau of Farmers' Institutes, F. E. Dawley, Director. The convention at Watertown, Jan. 18, will be the meeting of the State Association, at which many of the progressive bee-keepers of this and adjoining States are expected to be present and take part in the discussions.
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GEORGE W. YORK, Editor. CHICAGO, ILL., DEC. 29, 1904. Vol. XLIV—No. 52.

Editorial Notes and Comments

Annual Index Number a Double One.

Again we have come to the last number of the American Bee Journal of another year. And this is the one that contains the index to its contents for 1904. Those who have carefully preserved each weekly copy as it came, will find the index a great help. We have tried to make it as complete and correct as possible.

In this number will also be found a generous slice of the St. Louis National convention report. We expect very soon to have another double number in which to complete it. Then we will soon have the reports of the Chicago-Northwestern, the Illinois State convention, the Ontario, and doubtless others. So there is a lot of very practical and helpful convention reading ahead for all who are to have the weekly American Bee Journal during 1905. Besides, we have arranged for the usual good department matter.

Experienced Convention Men for Conventions.

At the prompt opening of one of the sessions of the recent Chicago-Northwestern it seemed just a little slow in getting started. As it was very noticeable to the chairman, he cast about for the cause, and soon saw that only one or two of the best convention men were present. Shortly several more entered, and then things began to hum. The presence or absence of only two or three experienced convention men makes a very great difference in any convention.

Good convention men need not do all the talking. Sometimes they speak only when there is a lull. But they should always be ready to take part in the discussions. In order to do this they must, of course, be able to speak from their own experience or from a wide reading; if both, all the better. Dr. C. C. Miller, C. P. Dadant, N. E. France, Ernest R. Root, Emerson T. Abbott, W. Z. Hutchinson, Wm. M. Whitney, and many others that might be named were among the good convention men at the Chicago-Northwestern meeting lately. They helped make things move. The aggregate of their apiarian experience and opinions were equal to almost any or all questions that might be found in a question-box.

If we were asked to make only one suggestion to any local convention anywhere, it would be this: Try to have present several persons like the ones we have named. If necessary, it will pay to "chip in" and pay their expenses, in order to have them on hand. We think we could select 50 or more good convention men with whom we are personally acquainted. They are scattered from Maine to California, and from Ontario to Cuba. Every successful bee-keepers' convention owes much to the presence and participation of the good convention man. And many of them are being trained and developed from year to year. Hence, the improvement in the bee-convention of the past decade or more.

Bee-Culture in Arabia.

Something is told about it in Praktischer Wegweiser by Mr. Bourgeois. The Arabians are more skillful and fearless as bee-keepers than many of the French people. When working at the bees they have a vessel of glowing coals upon which they throw smoke-producing seeds. Though often trouserless, they are yet seldom stung. The hives, generally on the ground, lie horizontally in two rows, one on the other, the whole covered with boughs and weeds. The hive is a cylinder 8 inches in diameter, and 3 or 4 feet long, both round openings closed with a cover woven from straw, or a piece of cork.

He takes the honey by removing the hinder cover, cutting out the combs as far as he can reach, then doing the same thing at the other end. In a good season he gets 3 or 4 quarts of honey from a colony, which he sells on the market. After pressing out the honey the combs remaining are pressed into balls and sold or traded for trash to Jewish peddlers.

The Arabian is fond of honey, and when he entertains foreigners he melts together butter and honey, and each guest, sitting on his mat, dips his piece of bread in the dish.

Shallow vs. Deep Extracting-Combs.

Perhaps the great majority of bee-keepers who produce extracted honey use the same frame in the extracting super as in the brood apartment. A chief reason for this lies in the fact that it is easier to have only one size of frames, and brood-frames already on hand may be used in the extracting super. There is greater expense, too, in shallow frames than in deep frames to hold the same amount of honey. All this admitted, there are still arguments in favor of the shallow extracting frame that induce some to keep on hand a stock of shallow combs to be used for no other purpose than extracted honey.

It is claimed that honey of lighter color can be obtained if the combs have never been bred in, and that the labor of uncapping is less with shallow than with deep combs; but some do not admit these claims. Other advantages can hardly be denied. Bees will begin work more readily in shallow frames; there is not so deep a space to be kept warm when the first super is given, and less break when an additional super is added beneath. One point upon which stress may well be laid, is that in shallow frames the ripening will be more even, while in deep frames too often there will be unripe honey in the lower part of the comb when the upper portion is sealed. When the supers are to be removed for extracting, smoke will drive the bees mostly out of the shallow supers, while with deep frames the bees will be merely driven to the lower part of the combs. It is also claimed that the queen is less likely to go up into shallow supers. Combs are less likely to break in shallow frames, and there is less need of wiring.

Bicycles for Out-Apiaries.

Bee-keepers who do not own bicycles have lately taken comfort in assurances that after all a bicycle was not such a very desirable thing; but J. A. Green, in Gleanings in Bee Culture, strikes a vigorous blow in their defense, as follows:

> The statement quoted in the Review, that the man who uses a bicycle to go to an out-apiary has done a day's work before he gets there, makes an old century rider smile. Although I keep one or more horses all the while, I prefer to use a bicycle whenever possible. I am bee-inspector for Mesa County, and have made all my inspecting trips on the wheel. Sometimes for a couple of weeks together I have ridden from 15 to 30 miles nearly every day, inspecting from 75 to 100 colonies of bees at a trip, and the least tiresome part of the day's work has been that spent on the wheel. I enjoy it more, probably keep in better health for it, and get more work done at less expense for the taxpayers who foot the bills, than if I used a horse.

Miscellaneous News Items

We Wish "A Happy New Year" to every reader of the American Bee Journal, and may it be the best year you have lived.

General Manager N. E. France will speak on bees and bee-diseases for ten days in New York State in January, as per the convention notices on another page. He may also attend the Michigan convention the latter part of January. Mr. France truly is "as busy as a bee".

Why Not get a bee-keeping neighbor to let you send his subscription to the American Bee Journal for 1905 with your renewal? You know the value of this journal to its regular readers, so you can best tell its merits to other bee-keepers who should be reading it regularly.

By the way, a year's subscription to the old American Bee Journal would be a fine Chistmas or holiday gift to your bee-keeping relative or friend.

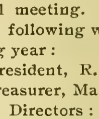
Texas Bee-Keepers are requested to read and heed the following notice and suggestions:

> We now have before the Legislature a Pure Honey Law and a petition for a liberal appropriation to carry out the Foul Brood Law that we already have.
>
> We want you all to write two letters, one to your Representative and one to your Senator, endorsing both measures and asking their support for both.
>
> Then write me a ringing letter in a few words endorsing the laws; these letters will be presented to the Legislature with our petition for what we want.
>
> Remember that it requires only a few minutes in which to write your Senator and Representative and a few words to me, and if all will do this it will help wonderfully. F. L. Aten, Round Rock, Tex., is chairman of a committee to raise funds to defray the expenses of the Legislative Committee appointed by the State Association, and any contributions sent him will be thankfully received. Let us be up and doing, and every one do his duty. H. H. HYDE,
>
> *Assistant Secretary and Chairman of Statistics,*
> *Texas Bee-Keepers' Association.*
>
> San Antonio, Tex.

The Ontario Convention was held in Toronto, Nov. 15, 16 and 17. It was, as usual, a successful meeting. We expect to publish a report of it later. The following were elected officers and directors for the ensuing year:

President, H. G. Sibbald; 1st vice-president, R. H. Smith; 2d vice-president, F. J. Miller; treasurer, Martin Emigh; secretary, W. Couse, Streetsville. Directors: W. J. Brown, J. K. Darling, M. B. Holmes, B. Lowey, J. W. Sparling, H. G. Sibbald, J. Alpaugh, Jas. Armstrong, R. H. Smith, G. A. Deadman, F. J. Miller, and Denis Nolan. Representatives: Ontario Agricultural College, Prof. F. C. Harrison; Canadian National Exhibition, E. Grainger; Western Fair, F. J. Miller; and Ottawa Fair, J. K. Darling.

Contributed Special Articles



Smoking Bees—How and How Much.

BY C. P. DADANT.

This question, answered on page 757, was undoubtedly asked by a beginner. But the answers must surely have bewildered him. "Do you use smoke before removing the cover?" "Yes, no, very little, not often, sometimes, not always."

The trouble is that the men who answer are all practical and are so accustomed to handling bees that they each have a successful method although no two do exactly alike. Had the question been, "Should a beginner use smoke before removing the cover," the answer, I will vouch, would have been "yes" in every case.

The practical bee-keeper who handles hives every day can tell before he goes to work whether the bees will need smoke at the entrance. If he is a fearless operator, one whom the bees do not molest, he will very probably open the hive without any smoke whatever. This method will do very well if there is no one near whom bees would readily attack. I have a friend in a neighboring city, who has been in the habit of handling his bees without smoke. Bees do not sting him, probably because he is not afraid of them, and because he is very quiet and deliberate in his movements. But he has a neighbor next door who was often stung, and who accused his bees of being a nuisance. While I visited him once he was telling me that he must sell his bees because they annoyed the neighbors. "Yes," said he, "they never sting me."

We went to the apiary together and he opened a hive, without using any smoke. The bees did not sting him, but two or three angry ones flew into my face. They were aroused and seeking whom they could punish for the annoyance caused them by their owner. I suggested to him then that he was probably the cause of his neighbor's protests. I advised him to use smoke at the entrance whenever he handled his bees, so as to avoid their flying into the next yard and stinging the neighbors. My advice was followed and there was no further trouble.

Personally, I am not a sting-proof bee-keeper. When I was a boy, my father used to laugh at me because I could not come near the hives without getting stung. He was a born bee-keeper; I was not, and I had to be trained. I have always found it advisable to use smoke at the entrance when opening a hive, early or late in the day, or during a dearth of honey. I would advise all beginners to practice smoking the entrance before opening a hive, until they become so accustomed to handling bees that they may feel sure of knowing before hand how they are going to behave.

Our leading bee-keepers are not always careful, neither are they always successful in handling bees without stings, but they usually care little about stings. Not long ago, I was visiting at the home of one of our best honey-producers in California. We visited together one of his apiaries, out in the wilderness, and he told me that he had had a horse killed by the bees accidentally. The apiary was located on the east side of a hill covered with white sage. He was in the habit of tying his horse on the opposite slope of the same hill, only a short distance from the apiary, but out of sight of the hives. One day, after handling bees for several hours, and finding them unusually cross, he discovered that his horse had been stung to death by them. He warned me that the bees were not to be relied upon at that apiary. As I was traveling and did not care to have my face swollen out of shape by stings, I asked him to let me handle the smoker, during our stay there. I carefully smoked each hive at the entrance before opening it, and not a single bee molested us, although we were there for several hours.

The old bees are always cross when the hive is disturbed. If the weather is fine, they leave the hive in search of honey and at midday there is less need of smoke than at any other time. If the blossoms yield honey, the bees are so intent on honey-gathering that very little smoke is needed, and, sometimes, in the busy part of the day, hives may be handled without the use of smoke. But when the bees are all at home, young and old, morning and evening, it is never a good plan to open the hive without first smoking the bees that guard the entrance. Experience dictates whether we should give much or little smoke, but when in doubt it is best to give enough. Too much will confuse the bees, and will cause them to rush about and even to desert the hive and this would be very inconvenient. However, it may be asserted that there is more trouble caused by too little smoke than by an overdose. When the weather is cool and the bees are all in the hive, more is needed. When it is warm and some bees are flying, a few puffs just enough to frighten the few guards, will prove sufficient.

In very good honey-producing seasons, there is need of but little smoke. A hive may be opened with so little disturbance, that many of the bees will not pay attention to the intrusion. I have seen bees start out for the field through the opening made by the operator in removing the cover. It is very easy to notice, as the working bee darts out, in a bee-line, for the field, while the disturbed workers hover around after taking wing, probably wondering what is to become of their home. The bee that has been harvesting honey, and knows where more of it is to be found, seems to pay attention to nothing else, and she flies out straight for another load as soon as her load is off.

It is therefore worth a beginner's while to become acquainted with the conditions. But a little smoke at the entrance will never do any harm, and, whenever in doubt, it is well to use it. Hancock Co., Ill.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

New Year's Greeting.

"A Happy, Happy New Year" to all the sisters! How I would like to be able to look into all your faces and *say* that—not merely write it. I would like to take you by the hand and thank you personally for all the kind, helpful words I have received the past year, for the cordial co-operation you have so heartily given in making our corner the success it is. I know it is appreciated and enjoyed by many, for they have personally told me so.

Don't forget that it is *your* letter, *your* question, *your* bit of experience, *your* helpful suggestion—in short, your help, that makes this Department a success.

Most cordially yours,
Emma M. Wilson.

Starting in the Bee-Business.

The following appears in the Chicago Daily News, in the department conducted by Marion Harland:

"I would like to know what capital and what experience would be necessary, and your good advice, for keeping bees. Would it be profitable as a livelihood?—P. J. K."

A woman who had kept bees successfully in the immediate neighborhood of New York city, told me that the business paid better than any other that she knew of. She invested $25 in bees and hives and at the end of the first year harvested 1,500 pounds of honey. She is a truthful woman, whose name would be recognized by many readers were I to give it. I repeat the story as I got it. Two small books —"the A B C of Bee-Culture and "The Blessed Bees"—are recommended to beginners. Marian Harland.

Marion Harland is well known as a very able writer, and thousand are indebted to her for information received, but she is evidently not in her element when upon the subject of bees. An investment of $25 in bees and hives might result in harvesting 1500 pounds of honey at the end of the year, but such a thing would be greatly exceptional. Let's figure a little.

Suppose she paid $5 a colony for her bees, which is not a very big estimate. That would give her 5 colonies. Now if she harvested 1500 pounds of honey that would be an average of 300 pounds to the colony. This amount has been reached, and in some cases exceeded, but it can hardly be reckoned upon as an average to be expected. Taking one year with another there are good bee-keepers who probably do not average more than 30 pounds of comb or 50 pounds of extracted honey.

Of the "two small books" recommended to beginners, the "A B C of Bee-Culture" contains some 500 pages—one of the largest books on the subject. "The Blessed Bees" is a work of fiction, and might well be replaced by one of the standard works, as Langstroth, Cook, etc.

Suabian Honigbrod.

Good House-Keeping gives the following as a dish from the fatherland.

"Cream half a pound of butter with a heaping tablespoon of lard, then add gradually in the order mentioned half a cup of honey, the juice and grated rind of one lemon, two teaspoons of Kirschwasser, one teaspoon of ground cinnamon, a heaping tablespoon of sugar, and the yolks of four eggs; blend these ingredients thoroughly together, beating until very light, and then stir in sufficient sifted pastry flour to form a stiff dough; place this in a bowl covered with a damp napkin in a very cold place for at least six hours before using. When ready to bake, place on the bread-board that has been lightly floured, and roll out to the thickness of a knife-blade; cut with a fancy cutter into small stars, brush over with yolk of egg, sprinkle with chopped candied orange peel and bake in quick oven.

The great secret of success in these delicious little cakes is to have the dough verv cold and the oven hot.

French Honey-Muffins.

One and one-half pints flour, one cup of honey, one-half teaspoon salt, two teaspoons baking powder two tablespoons butter, three eggs, and a little over one-half pint milk or thin cream. Sift together flour, salt, and powder; rub in butter cold; add beaten eggs, milk and honey. Mix smoothly into batter as for pound cake; about half fill sponge cake tins, cold and fully greased, and bake bread in good, steady oven for eight minutes.—Chicago Tribune.

Ask Doctor Miller ??

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Wintering Bees Outdoors.

1. How will bees winter in chaff hives, outdoors, with sticks over the combs, two or three thicknesses of cloth for covering, over this a tray of five or six inches of chaff, with cover over all, and inch holes in the gables, the entrance being ⅜x8 inches?

2. Would a high, tight board fence on the north and west be a benefit if hives are in a bleak location? NEW YORK.

ANSWERS:—1. They ought to winter tiptop.

2. Most emphatically, yes.

Wintering Bees in a Box.

Last summer I purchased a swarm in a box something like a cracker-box, and they are in it yet. It is chock-full of comb, and I suppose honey, also, as I have not taken any away from them. They are Italians.

1. Will they need feeding this winter?

2. Ought I to cover the box with anything? I have them on a stand on the south side of an appletree.

KANSAS.

ANSWERS:—1. If it was an early swarm there is not much chance they will need feeding; although it may be well to be on the lookout next spring.

2. Pile around the hive corn-stalks or something of the kind so as to break the force of the winds; but leave the entrance side well open so that the bees can fly out whenever a warm day comes. If you want to take extra pains, before placing the corn-stalks put old carpet or something of that kind over the hive.

Honey Granulating in Bottles.

1. I began the past season with two colonies, and they did so well that I was advised to extract the honey from two frames in each hive this fall, as there seemed to be more honey in the hives than was necessary to carry the bees over the winter. I did this, and the honey seemed to be of excellent quality, and I bottled and sealed it immediately, but I find now that what I have in bottles that has not been disturbed is one solid cake. What further should I have done to it to put it in proper condition to keep?

2. Is it well to hold on to this granulated honey until another season, and then feed it to the bees? or is there any way that it can be treated to put it in a condition to use?

MASSACHUSETTS.

ANSWERS:—1. If you had heated the honey, before sealing it, to something like 160 degrees, it might have remained liquid; yet

2. It is perhaps about as well that you did as you did, for there is a possibility of spoiling the flavor by overheating, and careful heating will now bring it back to the liquid state. Put the bottles in a vessel of warm water, set on the back of the stove, where it will not get very hot but will warm slowly; all the better if it takes several days. You can also melt it without setting in water, but it takes more care. Of course it will be all right for feeding next spring, thinning it a little with water; but it will be all right for table use any time it is melted. But are you sure you don't like it in its present state? Try spreading it as it is on bread or biscuit.

Drone-Comb vs. Worker-Comb.

1. If a hive of bees with one-tenth of the comb-drone, produces 50 pounds of comb honey, what would the same colony produce if all the comb was worker-comb?

CALIFORNIA.

ANSWER:—If the drone-comb is at the outside, and occupied all the time with honey, it would make little or no difference. In the center of the brood-nest, occupied all the time with brood, and the drones allowed to live till the close of all gathering, instead of 50 pounds being stored there would be—well, really, now, I don't know what there would be. More than anything else for the sake of setting up a target for sone one else to shoot at, I'll say there would be 70 pounds. Now, some of you that know more about it, tell us what your guess would be.

Difference in Races of Bees—Hetherington's Apiaries—Milkweed.

1. Is there any difference between the different races of bees in their constitutional power to resist the ravages of disease, such as foul brood, paralysis, etc.?

2. In what counties in Virginia and in New York State were Capt. Hetherington's apiaries located? and which were the more profitable, those in Virginia or those in New York?

3. Do you consider an abundance of milkweed as being of great value for honey, when growing near the bees?

NEW JERSEY.

ANSWERS:—1. Decided testimony comes from Australia, from Germany, and from England, that Italians resist foul brood much better than blacks.

2. I don't know; possibly some one else can tell us. His home was in Otsego County, N. Y.

3. It is hard to say anything very positively about it. Either milkweed does not yield alike in different places, or the different kinds differ in value, for all of the asclepias are milkweeds. One of them, pleurisy-root, is highly praised by James Heddon.

Proceedings of Conventions

THE ST. LOUIS CONVENTION.

Report of the 35th Annual Convention, of the National Bee-Keepers' Association Held at St. Louis, Mo., Sept. 27-30, 1904.

[Continued from page 854.]

Mr. Hutchinson then read the following paper, on

BEE-KEEPING AS A BUSINESS.

In reply to the query, "What will best mix with bee-keeping?" I have always replied: "Some more bees." When the conditions are favorable, I am decidedly in favor of bee-keeping as a specialty—of dropping all other hampering pursuits, and turning the whole capital, time and energies into bee-keeping. If bee-keeping cannot be made profitable as a specialty, then it is unprofitable as a subsidiary pursuit. If bee-keeping must be propped up with some other pursuit, then we better throw away bee-keeping and *keep the prop.*

General farming is very poorly adapted for combining with bee-keeping, yet the attempt is probably made oftener than with any other pursuit. There are critical times in bee-keeping that will brook no delay, when three or four days or a week's neglect may mean the loss of a crop; and these times come right in the height of the season, when the farmer is the busiest. Leaving the team and reaper standing idle in the back field while the farmer goes to the house to hive bees, is neither pleasant nor profitable. Drawing in a field of hay, while the bees lie idle because the honey has not been extracted to give them storage-room, is another illustration of the conditions with which the farmer-bee-keeper has to contend. The serious part of it is, that the honey thus lost may be worth nearly or quite as much as the hay that is saved. Some special lines of rural pursuits, like winter dairying, or the raising of grapes, or winter apples, unite with bee-keeping to much better advantage than general farming; but when bee-keeping is capable of absorbing all of the capital, time and energy that a man can put into it, why divide these resources with some other pursuit? It has been said that bee-keeping is a precarious pursuit, that it cannot be depended upon, alone, to furnish a livelihood; and, for this reason, it should be joined with some business of a more stable character. It is true that there are many localities where there is often a season in which little or no honey is secured, and, in the Northern States, winter-losses are sometimes very heavy, hence it would be risky to depend entirely for a living upon keeping bees, in a *limited* way, in such localities; but, if the average profit from bee-keeping, one year with another, is not the equal of other rural pursuits, why keep bees? The truth of the matter is that it is *greater;* and if bee-keepers would only drop everything else, and adopt methods that would enable them to branch out and keep hundreds of colonies where they now have dozens, they would secure enough honey in the good years to more than carry them over the poor years, and thus not only make a living, but lay up money.

When a man decides to cut loose from everything else, and go into bee-keeping extensively, making it his only and his life-business, the question of all questions is that of locality. There are few localities in which a small apiary might not yield some surplus, but when a man is to make of bee-keeping his sole business, the securing of the best possible location is time and money well spent. What a good, solid foundation is to a "sky scraper," a good location is the building up of a successful, extensive bee business. Having settled in a locality, the bee-keeper cannot study it too thoroughly. Especially must he understand its honey resources; the time when each flow begins, its probable duration, its quantity and character. He must know whether to expect a spring-flow, like that from dandelion, hard maple or fruit bloom, that will build up the colonies for the main harvest that is to come later. If there is likely to be a season of scarcity between the early flow and the main harvest, it must be known, and preparations made to keep up brood rearing by means of feeding or the uncapping of honey. The management will depend largely upon the source of the main honey-flow, whether it be raspberry, clover, basswood, buckwheat, alfalfa, sage, or fall flowers. Whatever the source, the bee-keeper must know when to expect it, and plan to have his colonies in exactly the right condition to gather it when it comes. This is one of the fundamental principles of successful bee-keeping.

Having secured the most desirable location, the next step is to procure the best kind of bees that can be obtained. There are several different varieties of bees, each with its peculiarities, but, aside from this, every bee-keeper who has had experience with several strains of the same variety, knows that some strains are superior to others—that there is scrub-stock among bees, just as there are scrub horses, cattle, sheep and poultry. With scrub-stock, the cost of hives, combs and other appliances remains the same; it is no less work to care for such stock; and it requires the same amount of honey to raise and feed it as it does the best stock in the world. In proportion to its cost, no investment brings the bee-keeper greater profit than the securing of superior stock.

Having secured a good location and good stock, the bee-keeper should adopt such hives, implements and methods as will enable him to branch out, establish out-apiaries, and keep a large number of colonies. At the present time the greatest failing of professional bee-keepers is of too few bees — of clinging to some other hampering pursuit. Many keep enough bees to furnish them a fair living in a good season, but when winter losses, and poor honey seasons follow one another in quick succession, there is suffering, or, at least, great inconvenience. If a man is going to follow bee-keeping as a profession, his only hope of success is in a good location, a good stock and the keeping of bees in such numbers that when a good year comes he can pile up the honey ton upon ton—enough to keep him several years. The larger a business the more cheaply can it be conducted in proportion to the results; not only this, but the very fact that bees are scattered about in out-apiaries several miles apart, adds to the certainty of the crop; as one locality often yields a fair crop while another a few miles away yields nothing.

It has been urged against bee-keeping as a sole pursuit that, while it keeps a man very busy during the summer it leaves him idle in the winter. Bee-keeping, rightly managed, will keep a man busy every day in the year. Too many bee-keepers fail to realize that the selling of a crop is fully as important as its production. The business part of bee-keeping has been sadly neglected. No set rule can be given as to how a man shall dispose of his crop, but it does seem like very poor business management to send away a crop of honey to some commission merchant, and then sit around all winter when good wages might be made selling honey direct to customers, or to retail dealers. The selling of the crop, and the preparations for the coming season may well occupy a man during the winter.

It should be understood, however, that bee-keeping is not an occupation in which one can easily become *wealthy.* In this respect it is much like other rural pursuits. Rightly managed, in a locality adapted to the business, it can be depended upon to furnish a comfortable living, and perhaps enable a man to lay up a few thousand dollars, but such fortunes as are amassed in merchandising or manufacturing can never be hoped for by the bee-keeper. Fortunately, however, the perfection of a man's happiness bears but little relation to the size of his fortune; and many a man with the hum of the bees over his head, finds happiness deeper and sweeter than ever comes to the merchant prince with his cares and his thousands.

W. Z. Hutchinson.

Dr. Miller—I would like to ask Mr. Hutchinson what number of bee-keepers would be left in the field if all are to be driven out except those who made a whole business of it?

Mr. Hutchinson—I don't know how many there would be left. There probably would not be very many. There might possibly be 200 in the United States. I would make that guess.

Dr. Miller—About that time will he tell us what would be the subscription price of the Review? [Laughter.]

Mr. Hutchinson—The subscription price of the Review, if it were published; would be the same. There might not be any Review. But there might be a time when there would be enough sole bee-keepers who could afford to pay to have such a paper printed.

Mr. Hardy (N. Y.)—I believe Mr. Hutchinson is very severe in his paper. I, for one, think I am the hardest hit in that paper because I am engaged in three or four different businesses. I am not only a farmer of 220 acres, but also a commercial photographer—what I call an expert—I get the very best furniture factories to photograph work for agents' samples; I am also a bee-keeper. It all depends, in my estimation, on conditions. Conditions have a great deal to do with a man's business. We may be successful bee-keepers and also run another business, in my estimation. Conditions alter cases. I started in the business three years ago. My father was one of the old school. I was in Syracuse, N. Y., in the photograph business. On the death of my father I went home. Mother had eighteen swarms of bees in Langstroth hives in very bad condition; my sister had taken care of them for two years. They were in a weakened condition, full of worms. I said, "I believe I can run these bees." My mother says, "You will never make a bee-keeper; your father said you were afraid of them and did not dare to go into the yard." I said that I would like to try it. In the first season I had 18 swarms and sold $154 worth of honey from them and I had a little honey to give away and got $100 for 34 colonies. The second year I did $750 worth of commercial photographing and the farm turned about $2,750, and that year I bought bees and sold $262 worth of honey. This summer since June 10, my bees did not get ready to swarm, and at the shaking time my photographing season came on. Since June 10 up to the present date I have made $592 from photographing, and turned out two tons of honey from 70 colonies.

Dr. Bohrer—I don't know exactly the object of a paper of that kind at this time before a convention of this character. I am sure that my feelings have always been in the direction of disseminating all knowledge and information possible among the people concerning the habits and scientific management of the honey-bee. I believe that with all we can do there is not any danger of there ever being an over-production of honey. We want the proper legislation, and the character of some of the resolutions that have been adopted here today were of that tendency. That is pointing in the direction of wholesale legislation that will protect, not only the bee-keeper, but his product, as well as the consumer. I would make a terrible fight before a legislative committee if it was intended I should abandon the pursuit of honey making. If it is the aim and object of this paper to discourage the dissemination of knowledge as to honey and honey bees, I am opposed to it.

Dr. Miller—In sober earnest, I do believe that the general welfare of the public demands to a certain extent that bee-keeping shall be specialized. If it goes no further than to have a farmer keep a few bees—and I am not saying anything against that either—if we are to limit it to that there will not be the advancement made that there is. I believe the more it is specialized the more likely we are to have a larger amount of honey produced; the larger amount the better it is for the nation. If we can get it and have it used largely as a matter of every day diet we are doing the public a benefit. So that I believe Mr. Hutchinson is doing a good thing in urging that bee-keepers keep a larger number of bees.

Mr. Abbott—This bee-keeping as a specialty is a dream that we have been dreaming for a long time, and while these brethren have been dreaming that, I have been trying to educate the farmer to keep bees, and I have been publishing a little paper that goes to that class of people and it talks to about 20,000 of them every month, and that class of people buys about $25,000 worth of supplies from the first of January to the end of the season; and if you think you can eradicate that class of bee-keepers who can buy $25,000 worth of bee-supplies, and with something like 4,000 of them supporting a paper that believes in bee-keeping and general farming, you will make a serious mistake. This is kind of talking behind the scenes and giving a little private business, but I want to tell you the farmer bee-keeper is here to stay, and there is a whole lot of him, too.

Mr. Hutchinson—If bee-keeping would be advanced by doing away with the bee-papers I would be willing to step out and do something else.

Mr. Rhees (Utah)—As a specialist in bee-keeping I am not at all opposed to the farmers keeping a few bees, but I would discourage farmers keeping bees without knowing anything about bees. Anyone who will encourage a man to buy a few colonies of bees in order that he might have a little honey, without encouraging him to know something about the habits and diseases of the bees, is doing a great injustice. We spend a lot of money in keeping our yards free from disease that is spread by these people who do not know how to keep bees. I believe that the farmer can produce his own honey if he wants to. I would like to see him do it; at the same time I would like to see him become familiar with the habits and diseases of the bees so that by keeping a few bees he would not do a great injustice to his neighbors who are trying to make a living by bee-keeping. In my locality I am getting my living from bees. I have run a thousand colonies and over, for some time, and always succeed in getting eough to live on.

Mr. Calhoun (Mo.)—Mr. President, I really owe it to Dr. Miller, that I am today able to put on the market 15,000 pounds of honey this fall, and 10,000 pounds last year, but I am not a specialist. At our National Convention at Hamilton, Ill., some years ago, I asked the question—I was feeling my way—if there was anyone in the Convention that had made any money out of bee-keeping, if it landed any of them at the bank—that was what I was looking at. At that time I was a mechanic, a blacksmith, and I was making a living at the farm, and I knew how to raise corn and hogs and pumpkins. With regard to Mr. Hutchinson's paper, I am glad he has brought the subject before us. It puts us to thinking, but I believe that we are apt to get the wrong impression from his paper. Because men make a specialty of telling us how to farm, that does not say that the general public shall not farm. I believe in having specialists in the bee-business, to go on and tell us what to do, but that does not cut us off from doing that thing. Conditions change, and nothing takes place until the conditions get ripe for that. Honey ought to be shipped out of our country by the car-load, just like wood and corn. All over Missouri honey ought to be shipped out by the car-load. When I was a boy I was ashamed to go to town with a basket of eggs, simply because there wasn't a demand for them. Why? The idea had not obtained in the minds of the people that eggs could be shipped successfully, and the machinery had not been gotten up to make packages so that the eggs could be shipped to market. I remember when they used to take oats and bran, put the eggs in it and haul them to Hannibal, and of all mixtures you ever saw when they got there, they had it! Now conditions have changed, and I thank God specialists have gone forward and shown us we can put up our honey in a marketable condition so that we can put up our productions together, send them to the market, and get a market price for them. Some say, how are you going to sell this honey? Last year I called their attention to this fact that there is no one so far from market as he who has nothing to sell. I am interested in the producing part of the honey season, to produce the honey, and between times in the winter I can sell what I have produced. I go right around among the retail merchants in the large towns, and in the outskirts, and I take their orders for so many cases of honey. I go to some wholesale man and say, "Here is an order for so many thousand pounds of honey, can't you handle a few thousand pounds at that price throwing in this order with it?" I sell to the wholesalers by the ton that way. The conditions are ripe for every farmer to produce honey so that there will be a market in our towns for shippers to the great markets of the world. I am glad we have specialists, specialists in the line of bee-journals and specialists in supplies to put it into marketable shape. I believe the time will come when we will take our honey to the towns and there will be a place there to sell it as we do our eggs and butter. I believe we really lose sight of the real worth of the bees over the world. I believe we have our eyes on the central benefit of bees, and that is the production of honey. If I understand from the writings of these men in their journals they hold that the primary work of the bee is to fertilize the flowers, and we are getting our minds upon this central fact, the production of honey, and we are getting a better class of farmers; they are gaining, and you are going to find out they do not have to be specialists in the way of producing honey. The time was when, if we had a boy that we couldn't make a doctor or a lawyer out of, we would say, "Give him a mule and plow and let him go out and plow the ground." The conditions are changing. The time is coming when we are going to see that the brains will be kept on the farm, for if we need medicine we have gone forward and put it up in packages, if I need a cathartic I can go to the mediocre and say, "Give me a package of it." The time is coming when we can see that the farmer will be an intelligent man and he will go in partnership intelligently with God and that is what they are going to do; and he won't be a one-cyed man, that is, simply raise hogs and corn; he will be able to raise everything that is produced on the farm. Producing honey is intimately connected with farming. Let this brother be a specialist that is a specialist indeed. If you are manufacturing goods put them in marketable shape for the least money you can furnish them at. There is no such thing as laws of nature, it is Divine action. I want to say we get very closely in harmony with Divine action when we touch Mother Soil. Try; if you make a failure, all right. Look at the olden days when they tried to convert the baser metals into gold, what they brought to us? They brought Mother Chemistry. Look at her children today. Look at Columbus when he tried to open the back door to India. It was a miserable failure, but he has thrown wide open the portals of America. If you meet with success go on; if you fall down, get up again and get stronger.

Mr. DeLong—I am an enthusiastic bee-keeper. I am like the brother who said, "I don't believe nobody can get me to quit keeping bees; they might hang me but I am not a coward." How Mr. Hutchinson's paper did scorch me. Perhaps I didn't get at it right. I want to say to Mr. Abbott —I have known him a long time—if the whole lot of the farmer bee-keepers were specialists, will you please give us the estimate of your sales of supplies? We are going to make you some specialists if we can. When men come to see me I can give them milk and honey because I have a dairy. I have 100 head of cattle, 50 acres of orchard and 400 acres of land. I can give you milk and honey and peaches and apples; and people come and ask my advice on bees and I give them that. I have made money in keeping bees. I have had 525 colonies. I live in Central Nebraska. Yesterday morning as soon as I approached the Denver Special for St. Louis I got in company with a very fine man. This gentleman was somewhat of a Jew, and he got all there was in life and he found out that I was a bee-keeper, and said to me, "In this bee-keeping, they kind of take care of themselves." I said, "Oh yes, they take care of themselves just like your business does; they don't need attention any more than your business." He had $5,000 worth of orders in his grip. He said the footpads could take his clothes as long as they left his orders. People come to me and they want honey sometimes butter and bread, or milk and honey, and I would give it to them; and then, by the way, some of them want canteloupes, and I could give them those because I have raised them ever since we had the-round-up on canteloupes in Omaha. This gentleman said to me, "How did you get so so many bees?" I said, "I got them sitting down at the corners whittling those grocery boxes and telling yarns, and the bigger the yarns the more bees I got." [Laughter.]

Pres. Harris—I ask your indulgence for a moment. In appointing a committee to wait upon the Pure Food Congress I omitted to put the mover of the motion on that committee. If there is no objection I will put him on that committee at this time.

Mr. Pressler—I ask that Mr. Dadant be substituted for me, as after we adjourn I wish to meet another committee.

Pres. Harris—Then we will put Mr. Dadant in your place.

Mr. Reinecke—I would like to know where you get your specialists if we cannot keep these going; it would be like taking a queen away from a colony—your specialists will all die out in a short time. The few colonies I have make more than one hundred percent on my investment. I don't think there is anything else would do it. I can take care of an apiary at home, and take care of my other work. If I find I have success then I can go on further. It takes only a few colonies to start with.

Mr. Krebs—It does seem to me that this question has had sufficient argument, yet I would like to suggest that it seems people do not seem to understand the idea Mr. Hutchinson wished to bring out. While he speaks of specialists, as I understand it, he simply means those that intend to make a living of it should make a specialty of that business by understanding all the rudiments. I don't think Mr. Hutchinson would even hint at such a thing as nobody beginning while he is yet in another business.

Mr. Abbott—Is there any man here that has not had any source of income from any other direction except from his bees this year?

(Six members stood up.)

Dr. Miller—I don't consider that a fair question, really. If I should find a quarter on the street it would rule me out.

Mr. Abbott—But you didn't find any quarter.

Dr Drunert—I would like to ask Mr. Abbott a question; I have a farm and an apiary, and I run the two together. The farm lost me money but I made $500 out of the bees.

Mr. Abbott—That shows you are a good bee-keeper, but a poor farmer.

Dr. Drunert—I have farmed successfully and paid off the mortgage on my farm, and I have made a success of bee-keeping.

Mr. Diebold (Ill.)—I understand from Mr. Hutchinson's paper that if a man gives his money and his intelligence to bee-keeping there is more profit from it on account of the fact that you can buy manufactured goods in larger quantities, and get down to the wholesale price.

Mr. Andrews (Cal.)—I suggest we leave this question like J. P. Israel left the question of hives. He claims the world's record for making hives. After they had discussed the hive question through all the bee-papers he said it seemed to lie with the bee-keeper, and he could judge for his locality the best hive to use in that place; and that is the only way to leave the question of the number of colonies of bees to keep.

SELLING GRANULATED HONEY.

"Is granulated honey in the Aikin paper package a benefit to our markets?"

Mr. France—At the request of one of our members I wrote that question. It possibly does not cover the ground intended. The idea is whether the effect of granulated honey upon the market is injurious, or should we educate the people on that point? This gentleman referred to the Aikin package from the fact that it was put up in that form.

Mr. Abbott—I want to call the convention's attention to a condition of things that exists that might be of some advantage to them in that line. I have been receiving circulars from people in St. Louis, I don't know who they are, advertising what they call a paper pail which they say will hold oil. If it will, it will hold honey. I wonder if those people who wanted a sack could not get that pail. You could make them of paper with thin tops and bottoms if you want to.

Dr. Miller—I would say that any kind of package, in the matter of honey, which did no harm to any other kind, might be a benefit. If Mr. Aikin's package can make customers that would otherwise not be made then it is a good thing. That does not say that I or anybody else must adopt that. Just answering that question, I do believe Mr. Aikin has done good by introducing that thing amongst the bee-keeping fraternity.

Mr. Brown (Cal.)—I would like to say we had a little experience in California in trying a package similar to that. We used the common oyster-pail made of one piece of heavy manila paper. We put up several tons of honey, that way, and in the winter and spring season up until the hot weather in our climate, they stood firm, but I was told a few days ago, when leaving there, in some cases when it got real hot the package had absorbed a little bit of moisture and, therefore, to some extent, spoiled the looks of the package. But they had no paraffin on them, simply manila paper as you see it in your stores today.

Mr. Weber (Ohio)—I believe it would be a good thing to educate the people to the fact that granulated honey is pure. While you would bring it before the public and teach them it was pure it would result in consuming more honey, because when the people see granulated honey they think it is adulterated. I believe that is a good thing for the smaller associations particularly, to take up and teach the people it is pure honey.

Mr. Muth—I understand now that granulation of honey is not a proof of its purity; it can be mixed with almost 50 or 60 percent and then granulate.

Mr. Lovesy (Utah)—Mr. President, in our country we have been trying for years to educate the people to eat granulated honey. Last year a gentleman in one of our towns brought over a wagon-load in these paper boxes to Salt Lake City, and around the County, and he had to open those boxes and let each person eat a piece of it before they would believe it was honey. It was almost as white as snow. If we try to put our honey on the market in that way they insist that it is sugar, and, in fact, I cannot even sell it in glass in Salt Lake City. I have to put a little portion of what we call amber honey in it to give it a kind of golden tint, and then they believe it is honey. It is well known that Alfalfa honey will granulate quicker than any other.

We have to liquefy our honey in the winter time for from three to four days and ship it in a liquefied condition, and in that way it will go sometimes for months in the coldest kind of weather without granulating again. Sometimes it will granulate the second time and sometimes we can keep it for two or three years and it will not granulate.

Mr. Gill (Colo.)—I think Mr. Lovesy is mistaken when he says alfalfa is more prone to granulate, because there are several kinds that will granulate before alfalfa. We reckon alfalfa will stand up longer than basswood. We have one kind of honey in Colorado where the bee has to hurry home to get there before it granulates!

Mr. Dadant—I think this question of the granulation of honey is very important. I think we were among the first to extract any in large quantities. We have been producing extracted honey for years, and we have sold hundreds of thousands of pounds of it. We have educated a great many of our patrons to the use of extracted honey, and we sell nearly all our honey granulated. You run the risk of burning your honey if you melt it. After all the natural condition of extracted honey is granulated in the winter. I believe Mr. Weber's argument is good. It is said they can manufacture honey that is granulated. When you find adulterated honey on the markets it is liquid, and your honey always granulates, therefore it is well to educate people to use honey that is granulated. We should insist on the fact that good honey in cold weather will granulate except in a very few instances.

Mr. Rhees—This question interests me. I have not in the past done very much in producing honey but I propose doing more in the future. I have sometimes thought if we could invade the candy market it would be a very fine thing. Children are very fond of honey, but in this day of enlightenment we are accustomed to having things prepared in a convenient form. On account of that we much dislike anything that causes any particular effort after we buy it, to prepare it for use. Some people do not like honey in a candied form, and I believe the majority of people would rather eat it on their hot rolls and batter-cakes in liquid form. But before they can get it in that form they have to liquefy it. This is something that most housewives would not do. I believe if candied honey could be put up in a small enough package, in little tubes say, or some smaller form, that it could be sold and used as candy by the children, and it would be very convenient.

Mr. Davis (Tenn.)—I would like to ask Mr. Rhees a question in regard to liquefying his honey. I understood him to say he liquefied for several days. Does he mean he keeps it warm for several days?

Mr. Lovesy—About 120 degrees. If you get it too hot you usually color it. I liquefy it from three to four days and keep it maybe a little less than 100. I find even at that if I put it on the stove and keep it there for two or three weeks it will color it. If you put too much heat on it you can spoil both the flavor and color in a few hours. I liquefied the whole of the honey that I sent down here to the Fair on a furnace, and I left it there for four days, and still you will find some of it candied.

Mr. Hart (Cal.)—I would like to know if Mr. Lovesy keeps a fire under his honey for four days?

Mr. Lovesy—In liquefying honey to send down here to the Fair we put it on for a couple of days. In fact I had found out many years ago that by liquefying and keeping in a liquefied condition for three or four days it would keep liquid; and as I said before, if it granulated the second time we would go through the same process, and I have had honey keep for two or three years after that, in a liquefied condition. If we had liquefied it for only 24 hours or so, an then took it off the first cold snap that came, it would granulate again.

Mr. Dadant—Do you melt it over water or on the stove?

Mr. Lovesy—Generally on a coal-oil stove. If you use that, it is a good idea to get an iron ring and set the can on that. I use a coal-oil stove with three burners.

Mr. Dadant—I don't know whether this is exactly on the question, but Mr. Lovesy gives us an impression that honey heated to more than 120 degrees will color. I believe his method of heating has something to do with that. From what he tells us he does not put it over water but on a coal-oil lamp and heats it to 120 degrees. If he would examine it he would see the honey that is right next to the fire becomes a great deal hotter than that, and the honey next to the metal gets burned and turns dark, while the rest of the mass is still cold. The only way in which you can melt honey and keep it from being damaged by heat is over water, one vessel in another. You must not let the water boil, as it will evaporate the essential oils of the honey. I think the damaging of the color comes from what I stated.

Mr. Abbott—I like to agree with Mr. Dadant whenever I can, but I have to disagree with him this time. You don't have to have water in order to heat honey properly. You can heat honey with a dry heat just as well as you can with water; in fact it is better. I have been dealing in extracted honey for 20 years and I have bottles that have been heated up a half dozen times; some of them are just as white as the day they were first put in the bottle and the flavor is not injured in the least. We used to use water; we don't do that any more, because we don't want our labels destroyed. As soon as it granulates in the store the wagon takes it up and it must be liquefied and go back in that condition, and if we used water we would have to put on new labels every time. We do it with dry heat, but the vessel which contains the honey must not come in direct contact with any fire.

Mr. Pressler—The question was whether it is profitable to use the Aikin package to sell granulated or extracted honey.

Mr. Lovesy—This question of granulated honey is a question that interests most of us. My experience is, that what Mr. Dadant says does not pan out with me. I put sufficient heat on those cans of honey that they will take at least 24 hours before the honey melts, and then I leave it there the full length of time. In the winter time I leave it three or four days, and when I pour the honey out it is as white in the bottom of the can as at the top, and if Mr. Dadant's theory was right it would be colored at the bottom. The idea of liquefying it for that length of time is to keep it in liquefied form afterward.

On motion of Mr. Hyde, the convention adjourned to Wednesday, at 10 o'clock, a. m.

SECOND DAY—THIRD SESSION.

At 10 a. m. Pres. Harris called the convention to order and at his request the Rev. Mr. Brant led the convention in prayer, after which came the following:

PRESIDENT HARRIS' ADDRESS.

It affords me much pleasure at this time to address you as your president. This is the fourth convention of bee-keepers of the world, and the 35th annual convention of the National Bee-Keepers' Association of America. I feel proud to preside over the deliberations of such a body of ladies and gentlemen as are here present. It makes every bee-keeper at heart feel proud of the association that we have, and by mingling together to know that by being in touch with one another we can in our own way use our best endeavors to push our interests to the front.

Talking on international matters, you have here, within a few hundred feet, one of the greatest displays ever known in modern times—the World's Fair—something that no mind can fathom; something that those who have helped to construct it cannot tell you its great beauties. It is something that is a great educator in modern times to the average mind. You go there and look through the foreign industries and the different buildings and you find the crude appliances of long ago and the magnificent appliances we have at the present time. Such is the case in beedom. You can look back years ago when our appliances were crude. We have got down today to modern bee-keeping, where you are making it a science, where you are doing all you possibly can to build up your industry. You should feel proud of it. You should feel proud that you are meeting here today in the World's Fair City. Nothing grander in the history of this country has ever been presented to the human mind.

Some of you have visited, and other will visit, this Fair before you leave the city. I want to say to you as your presiding officer, that I know no north, no south, no east, no west, and I hope that each and every one of you will have this same feeling in your own hearts, to meet here as a band of brothers to push forward with your shoulder to the wheel of this organization, that not only now is a grand organization but in the future will be one of the grandest in the United States. We have this representation of foreign countries. We are glad to know they are here; we are also glad to know that they take the deep interest they do in coming here to mingle with us.

The matter of legislation is one of vast importance to us all, and I hope before this convention adjourns *sine die* that there will be a resolution passed here that a committee be appointed of one or two good bee-people from each State that may go to your representatives and your senators, and try through the committees we have appointed, to get National legislation, to put us in closer touch than we have been with the several States and the government of the United States. When you look over this vast country and know that we have lots to learn, lots of land undeveloped, you can see what we can do for the bee-keeping world. Take California, Utah, Texas, Idaho and Colorado; there are thousands of acres of land there today under the irrigating system that will support tens of thousands of families. We can be bee-keepers there and produce the finest honey known on the face of the earth. Those of you who are in the industry do not think you can ever produce too much honey because the population is increasing, and they need more of the sweetness through life. I want to say to you with irrigation that there will be tens of thousands of acres of land thrown open to the public within a few years, and, as Horace Greeley said in his younger days, "Young man, go west," I advise many of you who have not got suitable locations to go west to the different sections.

To give you an idea, and to get in your mind's eye that which all should know, take my own section, 20 years ago the Indians were taken from the Reservation on the west of Colorado, and today we are shipping from that county 1,400 car-loads of fruit. We have shipped from that county ten car-loads of beautiful honey. Go on to California, look at the resources there; go into Texas, they have lots of undeveloped country, and if you are not satisfied with your lot, migrate west, and I know there will be something good there for you.

Now, we are here for one purpose, for the betterment of the bee-keeping fraternity of the United States. We want to mingle together; we want the best thought brought forward here, not in a selfish way, but so that it will benefit everyone who is in the organization. We want you also to interest your neighbors; get them to join this Association; and when you take into consideration that this industry produces $25,000,000 worth of honey a year, and that last year the honey product of the nation would have filled a train of cars 25 miles long, you then can know what a great industry it is. Some think it is an insignificant matter. The press has not even taken notice of us as they have of some minor matters that have come here in the way of congresses. But when we put before them the great industry we are trying to follow they then will give us more credit than at present.

If any of you in your hearts have any selfish feeling, if there is any clique in this convention to try to control anything, pass it to one side. You come here as a lot of brothers and sisters. If I am not a proper officer turn me down, and put someone else in; or if the other officers here are not the kind that you want to represent you, do your duty. Do not allow any clique of men here who in any way will try to run you. Think for yourselves. It is an age when all men should think. It is an age in which we are getting more gray matter in the tops of men's heads than in the past; it is an age that is the greatest in the history of the world, and as bee-people I hope this will be one of the greatest conventions that has ever been held in the history of the United States or the world, and that it may go out when we adjourn that we have had one of the best conventions ever held.

Jas. U. Harris.

MISLEADING NEWSPAPER REPORTS ABOUT COMB HONEY.

Mr. Abbott presented the report of the special committee on so-called comb honey manufactured by machinery, as follows:

We, your committee, to whom was referred the resolution on adulterated comb honey, beg leave to report as follows:

In view of the oft-repeated statement in the public press that comb honey is made and capped over by machinery, be it

Resolved, That the National Bee-Keepers' Association will forfeit the sum of $1,000 to any party or parties who will furnish beyond successful contradiction evidence that said statement is true, and produce as part of such evidence two pounds or more of such comb honey that has been manufactured without the use of bees in any way, with sufficient skill to deceive ordinary honey-experts.

E. T. Abbott,
Ellis E. Pressler,
E. Kretchner,
M. A. Gill,
Committee.

Mr. Pressler on behalf of the press committee read an article from the St. Louis *Republican* which had appeared in the morning issue showing an entirely wrong construction had been placed upon the report furnished by the Press Committee. It would appear from the report as published that half the members present at the convention believed that comb honey could be manufactured.

Mr. Abbott stated that the report had been written out correctly by the committee, and had been given over the telephone, but that the press people did not seem to be able to understand plain English. He stated the Committee would go in person to the newspaper offices, when he thought they could be made to understand.

COMMITTEE ON THE ADULTERATION OF HONEY.

Dr. Bohrer—I have a motion that on first sight might seem to conflict with some of the resolutions that have been adopted, but I hardly think so. I have a resolution that calls not only for a National legislative committee in this body but from all the States. It will be a massive committee but they will each have their respective work. I will read the preamble of the resolution which is as follows:

Whereas, The Adulteration of honey, by combining it with glucose, and selling the same under the label of honey has become so common throughout the country, that a large per cent of the people, who would purchase and use honey but for the uncertainty of being able to purchase unadulterated nectar; and,

Whereas, Such adulteration of honey renders it unwholesome as food, while pure and unadulterated nectar is undoubtedly the most wholesome liquid sweet known among the most civilized people of the whole world; and,

Whereas, The sale of adulterated honey under the label of pure honey, bears upon its receptacle a falsehood, and is a stain seriously detrimental to the pursuit of apiculture; and,

Whereas, The absence of full intelligence, in apicultural science, in connection with gross and inexcusable neglect, among bee-owners, is causing foul brood to be harbored by bee-keepers in almost if not all of the States and in Canada, to an extent that cannot be otherwise than the cause of serious loss among bee-keepers who depend upon the pursuit of apiculture for an income and support to themselves and those depending upon them, be it therefore

Resolved, That we, the bee-keepers of North America, in National Convention assembled, hereby instruct the President of the National Association of bee-keepers, with the assistance of the members from the respective States, to appoint two persons from each State and the Dominion of Canada, who shall organize themselves into a legislative committee, and as members of such committee, it shall be their duty to confer with the bee-keepers of their respective States, and urge them to see the members of the House and Senate in each State, and ask them to enact a law in each State (where such law does not already exist), imposing a penalty upon any and all persons found adulterating honey with glucose or other liquid sweets, and labeling and selling or exposing the same to sale; and also against keeping bees affected with foul brood, knowingly; and that will authorize and require such diseased bees, to be either cured of the disease or require them to be completely destroyed together, with everything about the apiary where they are kept, that is not thoroughly and effectively disinfected.

Dr. Bohrer—I move the adoption of the resolution. I did not formulate this resolution to provoke a lengthy discussion, and rather than have that I would withdraw it.

Dr. Miller—In order to have this matter properly disposed of there should be a committee to whom it be referred and I move the appointment of a committee of five on the resolution. [Carried]

The president appointed the following as a committee on resolutions: Messrs. Hutchinson, Poppleton, Smith, Hagood and Cogshall.

Mr. France—It may possibly be in order at this time that the resolution as offered by Mr. Abbott should come before this Committee for consideration. It is one of the best features we have had so far in the convention, and if that, as one of the shots fired out of the gun of the National Bee-Keepers' Association, could be put in a little leaflet so that the members of the Association could have it, it would eradicate this cry about adulterated honey faster than anything else, and I would like that either I or some one connected with the Association, should have the privilege of mailing that to the members.

Mr. Abbott moved, seconded by Dr. Bohrer, that his resolution be attached to the circular which the Board had been requested to furnish for distribution. [Carried.]

Mr. Stilson (Neb.)—Mr. President, in the address which you gave this morning to this body I noticed that you spoke about the representatives from foreign nations. On the Exposition grounds we have nearly one hundred nations represented. Among them some of the commissioners from the different countries are very anxious indeed to get hold of our American ideas of doing business. Would it not be proper to extend an invitation to some of those foreign commissioners to come here and meet with us? If so, I move that a committee of three be appointed to see some of them to invite them to come here and attend our Convention. [Carried.]

The president appointed as the committee Messrs. Stilson, Dadant, and Titoff.

Presentations of invitations to hold the next annual meeting in Cincinnati and San Antonio were made at this time. The executive committee decides finally as to the time and place of meeting.

Pres. Harris—I have now the distinguished honor of presenting to you the representative from Russia, Mr. Titoff.

Mr. Root—I might say Mr. Titoff came to our place of business about a year and a half ago, not knowing a word of English; he came with the full credentials of the Russian Government to learn American methods in bee-keeping that he might carry them back to his own country. We tried to converse back and forth but did not succeed very well. I showed him various devices and he seemed to be perfectly familiar with them. I motioned to him and he intimated he understood what I was trying to convey. He understands English now, and understands it well, but is not able to speak it fluently. At the same time he is a bee-keeper, and I am glad to bring before you a foreign expert bee-keeper. He understands the methods of producing honey. He has been out in one of the large bee-yards extracting honey, and I think perhaps during the coming fall or next year he is going south and possibly to San Antonio to learn something about their methods. I told him one of the good places in the United States to learn American bee-keeping was down around San Antonio where there are a lot of bee-keepers.

Mr. Titoff—I am sorry I cannot speak English good enough. I want to say I came here a year ago from Russia to learn American methods of bee-keeping, and I would like to tell the American bee-keepers that we use American ideas in Russia and we find it very good for our business. I find that many of the American bee-keepers and American citizens know very little about Russia; they think it is a very cold country; they think we could not keep bees at all. I have written a paper on "Bee-keeping in Russia," and I am sorry that I could not read it myself, so I will ask Mr. Abbott to read it for me.

Mr. Abbott then read the paper, as follows:

BEE-KEEPING IN RUSSIA.

A year and a half ago, when I came to the United States of America with the object of acquainting myself with the latest methods of American apiculture, I found during my stay among the apiculturists of this country, that many of them, in common with the rest of the Americans, had absolutely no knowledge of the existence of the bee-keeping industry in Russia. Many expressed their surprise in conversation on the subject that bee-keeping should be at all practicable in that country. I had to conclude that in the belief of the general run of people Russia was a country where bears are wont to stroll around the streets of cities in the broad daylight, where the only means of transportation is furnished by arctic dogs, and fur coats are worn in the middle of summer. Siberia, with the convicts—they thought—was a land of the eternal snow and cold and darkness and was withal a land replete with horrors. Such ideas could only be explained by the great distance between the two countries and by the difference in language and literature.

It is my desire to throw a little light upon the question whether apiculture really does exist in Russia or not and in whate state it is. I take advantage of my presence at the Convention of the North American Bee-Keepers' Association in order to accord in my present paper a glimpse into the state of apiculture in Russia, and appeal to the esteemed members of the convention for a few minutes of their attention.

In the most ancient chronicles of Russian history there are many mentions not only of the existence of apiculture in Russia, but also of the fact that it was one of her chief pursuits. Thanks to the primeval forest which covered with hardly an interruption the entire country, thanks to the wealth and variety of her natural resources—still virginal in most places—commencing with the fiftieth degree of Northern latitude and southward, the bee-keeping industry throve everywhere. It flourished particularly in the South, Southwest and Southeast of Russia.

The consumption of honey, both in its natural state and as a beverage (Meth or Mead,—Remark of the translator) in ancient times was immense, according to historical records. All classes of people were fond of honey, and thought it healthful. Honey was considered an aid to the preservation and the strengthening of health, it was thought to lend physical and spiritual vigor to the entire organism.

After conversion to Christianity apiculture rose even higher in esteem. Wax was used in tremendous quantities in the sanctuaries of the Greek Church in the celebration of her holy rites. According to the laws of the Church, milk and meat are forbidden to be eaten during the fasts, and honey is used in great quantities as a valuable ingredient together with vegetable meals, and is therefore in great demand. It is thus seen that both wax and honey are indispensable articles for the religious requirements of the land. The progress of the development of bee-culture in Russia further increased the demand for the products of the bee-keeping industry.

The records of history show that for several centuries previous to the 17th century, and including the latter, apiculture was carried on in the most primitive manner; it was, as it were, "a product of the chase." An immense number of swarms inhabited the trunks of the forest trees, and honey abounded therein. The labor of man was limited to the locating and gathering of honey.

About 1613 there appeared in Russia the first printed pamphlet on bee-keeping, the author of which was the Wojewoda (Duke—Translator's remark) Joannes Ostrogor. It was published in the Polish tongue and described a hive invented by the author and the manner of tending the bees therein.

We thus see that in the end of the 16th and in the beginning of the 17th century the Russian people had ceased to limit themselves to obtaining honey by bee-hunting, but commenced to give some thought to the question of "tending the bees." As a result, and owing also to the opulence of nature, apiculture became one of the great pursuits of the Russian nation. The extent to which the development of apiculture progressed can be seen from the fact that in many regions of the country even the ordinary duties and taxes were paid to the government in wax and honey. In spite of the immense home consumption, wax and honey soon became materials of manufacture, and for the two centuries mentioned products of apiculture formed the chief articles of export from Russia. Wax was particularly exported to England, and the amount of wax exported to that country reached 920 tons annually.

Towards the close of the 17th century we already notice a considerable decay in the bee-keeping industry, the chief reason of which was the deforestation and increasing tilling of the land. In 1692 wax was already imported into Russia from abroad.

Since apiculture had at that time an important place in the national economy, the decay of this important industry called for protective measures on the part of the Government, in order to preserve and strengthen it. The government commenced to parcel out free lands for apiaries. In 1775 the tax—hereto levied on bee-keeping—was removed. For the pursuit and the improvement of bee-keeping were granted prizes and rewards. A special medal with the representation of a bee hive was instituted for that purpose. Several books on the subject of apiculture had appeared and various newspaper articles dealing with same are noticed. In 1807 was published as a translation from German the book "Experiments in Apiculture." The Emperor Alexander I, rewarded the translator with a diamond signet-ring and command to express to him his imperial good wishes.

In the beginning of the 19th century it became a recognized fact that in order to raise the productiveness of apiculture it was necessary to improve the technical basis and leave the old ways of caring for bees for the better systems, and both the Government authorities and private persons labored with that end in view. One of the foremost and most active workers among private persons was Peter I. Prokopovitch. Convinced the word of mouth, and practical demonstrations were better than books in the task of placing apiculture upon a regular and rational foundation, Mr. Prokopovitch established 1828 a special school of apiculture and during the 22 years of his direction of that institution he graduated 566 students well intimate with rational apiculture. This school was in existence until 1879 and was of immense value to Russian apiculture. Mr. Prokopovitch is the founder of rational apiculture in Russia. The labors of Mr. Prokopovitch coincided with the discovery of the German pastor, Rev. Dizerzon (?), who gave a new impetus to the development of apiculture throughout the world. Mr. Prokopovitch greatly assisted the propagation of new currents in Russian apiculture. The school of Mr. Prokopovitch was materially assisted by the Government. The disciples of Mr. Pokopovitch scattered throughout Russia; establishing many model apiaries and teaching others.

Due to the activity of the Government and of private persons, interest in apiculture materially increased; many new inventions of hives and apiarists' supplies came up, though in spite of everything changed natural conditions so undermined this industry that the decay of apiculture may be clearly shown from figures I shall quote below.

Yet in the beginning of the last century these were the figures of the export of beeswax from Russia:

Exported from 1801 to 1810	1,250 tons,
Exported from 1811 to 1830	5,306 tons,
Exported from 1821 to 1830	8,129 tons,

Beeswax was exported from Russia to the value of $10,173,000 for the first half of the last century. The exports of beeswax from Russia for the last fifty years of the same century amounted to ———, the value being $586,632. In other words, the total exports for the first half of that century amount to 94 per cent of the whole, while the figures for the second half amount only to 6 per cent. In proportion as the exports decreased the imports of beeswax, as well as of mineral and vegetable wax, increased.

From the above it will be seen that not only the introduction of various technical improvements has failed not only to keep up the export of bees' products at its former height, but even to satisfy the growing demands at home for the products of apiculture.

Due to this sad state of affairs among apiaries, which has continued since the seventies of the last century, the Government now seriously approaches the problem of investigating the causes of the decay of this industry. The principal causes of this are as follows: A—The destruction of forests which is going on every where and the shrinkage of territory available for the gathering of honey. B—The great spread of the dread disease of foul brood. C—The increasing adulteration of wax and honey. D—Lack of sufficient knowledge among the apiculturists as to the rational care of the bees. On the basis of the data gathered in the course of the inquiry a number of measures have been suggested for the raising and the propagation of apiculture, which measures are being effected. At this period in the history of Russian apiculture there becomes prominent the active and energetic personality of the Professor of Academy Alexander M. Butleroff. He comes forward first with a report on "Measures for the explanation of rational apiculture in Russia" 1871 and since that time until his death he took the liveliest interest in everything connected with bee-keeping. He was the head, the leader of everything and of everybody. He wrote several hand-books on apiculture, which were published in thousands of copies and which formed the text-books for the majority of Russian apiarists. In 1886 under his management there came into existence the first Journal on apiculture in Russia,—Russki Ptcheloyopniy Listok—The Russian Journal of Apiculture, but also foreign news.

Mr. Butleroff established a model apiary at the All-Russian Exposition at Moscow in 1882, and for twenty days gave lectures on apiculture accompanied by demonstrations of various apicultural devices. At that time he gathered around himself a large number of followers intent on applying the newest methods to bee-keeping.

In 1887 a floating Apicultural Exhibition was arranged on a barge which sailed on the River Moscowa for 30 days, making ten stops, the object being to acquaint the people with scientific apiculture. This Exposition was visited by 60,000 people in all, who were all anxious to be instructed in correct bee-keeping. A second similar exposition was arranged in 1889 on the River Oka, making 27 stops and being more successful even than the first. A special exhibition for Apiculture was held in Moscow in 1890. Several model apiaries were shown; a course of apiculture was introduced in several schools. In 1884 there was opened a school at Twer with the sole purpose of giving instruction in apiculture, containing shops for making bee-hives and bee-keepers' supplies. All those enterprises owe their origin to the initiative of Mr. Butleroff. In 1896 there was established at St. Petersburg the first "Society of Russian Apiculturists," the aim of which is the scientific and practical working of the problems of apiculture, and coöperation tending towards the development of the latter. The society started a monthly magazine. Several branches of the society were opened in various parts of Russia. The society arranged exhibitions, conventions of apiarists, apiaries for instruction, courses in apiculture for teachers of the people's schools, etc. This fruitful activity of the society found imitators, new societies were established, of which there are now 38 with 8 divisions, and several more are to come into existence. Apiculture, including both theory and practice, is now taught in 80 apicultural schools in Russia, in many teachers' seminaries and other educational institutions. Apiaries were to be found in 532 people's schools in 1896, the teachers attending to the culture. Almost every society has its apiaries, warehouses and shops for apicultural supplies. Every year during the summer, courses in apiculture are arranged for the teachers and the people in general, each having hundreds of hearers annually. The South-Russian society has an experimental station with 30 divisions, in which there are made observations tending in one direction. There are several apicultural museums in Russia. In many Governments (provinces) also the Zemstvos [Zemstvos are administrative bodies consisting of elected representatives of the several classes of population in various provinces] have been active and energetic in the matter of elevating apiculture, inviting special experts for the purpose of giving instruction, visiting apiaries, giving advice and practical hints. At the present time there are nine apicultural journals in Russia,—eight in the Russian tongue and one in Lettish. Four are edited by societies and five by private individuals. Besides, a large number of articles on the bee-keeping craft are published in the various agricultural publications. Apicultural literature grows from year to year. There are several dozens of publications of local authors and many translations from foreign languages, including such valuable works as Langstroth-Dadant, Dzierzon, Berlepsch, Bertrand, Cowan, Cook, Maeterlinck, DeLayens, Dubini, etc.

In its task of self-improvement and reorganization Russian apiculture borrowed largely from other countries of Europe, particularly from Germany, which land had workers of its own and stood in the front rank with regard to apiculture. There is besides greater similarity in climate between Russia and Germany, and the means of communication are more convenient. As far as apiculture in the United States is concerned Russian bee-keepers knew very little of that until 1892, and they took little interest in it. That country seemed so distant. Their ideas concerning the difference in climate conditions and concerning other peculiarities of America are exaggerated. In 1892 there came out in Russia a new journal called "Messenger of Foreign Apiculture Literature." It was edited by Ghenna'-di P. Kondratieff, a most intelligent gentleman and a competent bee-keeper. Mr. Kondratieff, traveled abroad every summer, going to Germany, France, Austria, Italy, Switzerland and other countries, showing the keenest interest in all things appertaining to apiculture; he visited the best apiaries, made the acquaintance of foremost apiarists and their apicultural establishments. He found many things adaptable to Russian conditions and assumed the task of acquainting Russian apiarists with foreign apicultural methods. This was the idea of publishing that journal which has now become a lively echo of all that which may be usefully adapted from foreign methods to Russian apiculture. Mr. Kondratieff was well acquainted with the celebrated Swiss apiarist M. Edward Bertrand, who frequently described American apicultural methods in his journal, "Revue Internationale d'Apiculture." It was the esteemed Mr. Charles Dadant who awakened special interest among Europeans in American apiculture. The bee-hive with the large frame which he recommended gave excellent results in Europe, and the foremost apiarists in their turn commenced to recommend it with great insistence. Mr. Kondratieff, as the result of his tests, also warmly championed this hive and began to explain American bee-keeping methods in this journal. Many original articles of American apiculturists have been published in translated form in this journal during the 12 years of its existence. Apicultural news from America was also frequently published. The names of the famous leaders in America—Langstroth, Dadant, Root, Miller, Benton, Good, Doolittle, Pratt, Alley, never left the pages of the journal. All that could be applied to Russian conditions from Root's "A B C of Bee Culture" was quoted in the columns of that paper. The book of Benton was also reprinted, while Mr. Kondraticff, together with his co-worker and the present editor of the Journal, Mr. V. M. Isergin, translated in full and published in separate volumes the works of Langstroth, Dadant and Cook.

The result of this warm championship of Americanism has been the fact that today half of all the bee-hives with frames are of the American system of Dadant. How popular this system is can be seen from the fact that the name "Dadant" is now synonymous with the frame hive. If you want to find out in Russia whether it is a hive that can be taken apart or not, you say: "Do you keep your bees in Dadant's or in ordinary hives?" Many other apicultural supplies have been found as usual and convenient in Russia as they are in America, and you will find now in a good many Russian apiaries things in common with the well ordered apiaries of America.

Having given you a brief history of apiculture in Russia, I will finally give some figures illustrating its present state. About 328,417 persons are engaged in apiculture in European Russia—which in proportion to the entire population is 0.34 per cent. Statistics gathered in one province to show the division of sexes in the bee-keeping industry demonstrated that 35 per cent of the persons looking after bees are female.

The following is a table showing the number of hives containing bees in Russia:

European Russia	3,628,177	71.5 p. c.
Poland	116,414	2 p. c.
Caucasus	832,683	16.5 p. c.
Siberia	494,506	9.5 p. c.
Central Asia	34,942	0.5 p. c.
Total	5,106,722	100 p. c.

Assuming the value of a bee colony to be $1.50, the value of an old style hive at 50c, and of a frame hive at $4, this gives the capital invested in the apiaries as $12,484,500. Average gross revenue from each hive in honey may be fixed at 83½ cents and in wax at 51½ cents, altogether $1.55, which is 55 per cent on the capital invested.

As far as the number of hives is concerned, apiaries are insignificant. On an average there are 10 hives to an apiary in Russia. The owners are also the attendants. Hired apiarists are merely 1 per cent of the whole number.

In the majority of apiaries old style hives are still used. According to statistics gathered in 1894 there were only 13 per cent of frame hives in use. It may be safely assumed that this percentage has doubled since then.

The spread of frame hives in Russia is not at all the same in the various provinces of Russia. In 11 provinces there are 20 to 70 frame hives to each hundred. Frame hives in most common use in Russia are the Anglo-American, Dadant-Blatt, Root, Levitchky, and Dzierzon. The most popular hives are those of Dadant.

There is noted a general quantitative improvement in various territories which are especially adapted to apiculture. Thus for instance in the Kuban territory:

1893 number of hives	170,545.
1895 number of hives	299,218.
1898 number of hives	528,218.

In other words, the number of the hives increased more than threefold in five years. Good results are also attained in Siberia, particularly in the region of the Altai mountains. More risky is the pursuit of apiculture in localities which have a more severe climate, where the loss in the course of a year may amount to a half of the whole bee colony. Thus, for instance, in the Ufa province there were 522,150 colonies at the beginning of winter, and only 258,736 remained for swarming, about 263,714 perishing. This is about 50 per cent. Starvation, 54.9 per cent; foul brood, 1.4 per cent. The causes of destruction were classified as followed: Spoiled honey, 35.1 per cent; cold, 7.7 per cent; mice, 0.9 per cent.

Bee-keepers in Russia suffer a great deal from the habit of the bees of gathering honey from coniferous trees, what is called "honey dew."

In several portions of Russia foul brood is a source of considerable damage, and Russian apiaries are seeking means to combat this dread disease. Salicylic acid seems to give the best results among all the means adopted. Also formic acid, formalin and the transferring of bees to new hives.

Most of Russia abounds with honey-furnishing vegetation, which yields a good harvest for bees, both of honey and pollen. We may name the Linden tree, willows of every kind, acacias, apple trees, plum trees, pear trees, etc., raspberries, all sorts of clover, buckwheat, lucerne, mustard, etc. In many localities there is possibly a harvest of 150 pounds per colony in the season. The maximum harvest of honey per day is said to be 17½ pounds.

One of the weak points of apiculture in Russia is the lack of orderliness in the sale of its products in the interior of the land. Prices for honey and wax are subject to fluctuations. In some localities good extracted honey is sold on an average for 10 cents, while honey in the comb is sold at 15 cents per pound. In other places it is difficult to obtain even half of the above mentioned prices. Bee-keepers in out of the way places are altogether at the mercy of dealers who earn great profits from the labor of other parties. Lately there is more and more comb honey put in tin boxes of various sizes and taken into commerce under the name of "Exquisite," and sold at very high prices—25 cents, 30 cents and over. The sale of honey in this form is considered more profitable than in sections.

There are about 98,379 tons of honey produced throughout the Empire, the value being $4,250,000. The consumption of honey inland is distributed as follows: As a table delicacy 23,604 tons, or 89.3 per cent of the whole production. About 596 tons are used in manufacturing—2 per cent; 725 tons or 2.7 per cent are used in the production of honey cake. In the production of honey beverages, such as fruit waters, lemonades, preserved fruit, condiments, syrups, about 1,851 tons or 5.5 per cent is used. There are finally consumed 18 tons or 0.3 per cent for medical purposes in pharmacies.

With regard to the export trade in honey products, it appears that during the five years 1890-1895 there were exported from Russia 826 tons of honey and from 1895-1899 only 344 tons. This export business is rapidly decreasing. In 1901 only 29 tons of the value of $5,776 were exported. The imports of honey into Russia during 1895-1899 amounted to 1,291 tons, to the value of $184,500, or on an average per year $36,900. In 1901, 91 tons to the value of $10,306 were imported from abroad.

The annual production of wax in Russia amounts to 8,676 tons. The production of beeswax is a little more than one-fifth of that of honey. Twenty-two tons of wax were exported from Russia in 1895-1899, but in 1901 only 3 tons to the value of $2,185. The imports were as follows: 1897-1900, 9,001 tons to the value of $4,685,500, or in other words the average annual imports for that period amounted to more than 2,258 tons to the value of $1,221,000. In 1901, 2,872 tons of wax were imported, the value being $1,574,536. In 1902, 3,561 tons to the value of $1,997,500.

It is thus seen that Russia pays to foreigners for the products of apiculture more than $2,000,000 annually. The task of Russian apiarists is how to retain this sum paid to foreigners, in their own hands, for which reason they have to increase the production of wax 2,258 tons, or about 1.1 pound per hive. Or they must increase the number of hives by 3,466,960, in other words bring up the entire number of hives to 7,573,000. The intense interest shown by Russian apiaries in the problem of improving apiculture, their energy and activity directed to the elevation and the propagation of this industry, give me the right to state that the sum of money above mentioned which is now paid to foreigners will remain in the country and will be employed in the improvement of the industry. The natural resources of the land also champion this view. All that we need is knowledge, and with the spread and increase of popular education, knowledge has begun to enter the most distant nooks of the land. Personally I have the most absolute faith in the future of apiculture in our fatherland.

In conclusion, in behalf of bee-keepers of Russia, and as their first representative to a convention of American bee-keepers, I extend to you the cordial greetings of the Russian apiarists. We feel deeply indebted also to you for the many ideas borrowed from America to advance bee-keeping in Russia. ABRAM TITOFF.

FOURTH SESSION.

At 7 o'clock p. m. the President called the convention to order.

Dr. Bohrer—I have been very much interested in Mr. Titoff's paper and I regard it as one of the most exhaustive reports I have ever heard from this or any other country, and it will be no discredit to have it published side by side with our best statistical reports, and if it were possible for this Association to make an application and succeed in having it published by the Department of Agriculture as well as having it appear in our National report I should very much desire to see it done. I desire now to have this Association tender to the representative from Russia a vote of thanks for the excellent report which has has given us.

Mr. Abbott—I consider this one of the most exhaustive papers I ever read in my life. I only regret that the paper was not put into my hands so that I could have become a little more conversant with it and could have read it more intelligently that it might have done more credit to this foreigner who evidently has given this subject more thought and more close and careful study than the majority of Americans; and I most heartily concur in the motion and if there is any way to add emphasis to it or to make stronger I say Amen.

Dr. Bohrer—We want to tender through Mr. Titoff to the Russian Government a vote of thanks.

Mr. Whitcomb—The yield of wax reported here is extraordinary, even the honey-flow is extraordinary. We fail always to get wax and honey at the same time. I would like to hear from the gentleman how they can do that. I am finding no fault with the report. I do not want to make any objections to it but it does seem to me to be a terribly strong statement.

The President put the motion, which on a vote having been taken was declared carried.

On motion, Mr. Titoff was invited to speak as an honorary member.

At this stage the President introduced to the audience Miss Ethel Acklin, who favored the audience with a solo, entitled "The Hum of the Bees in the Apple-Tree Bloom."

Mr. Stilson—We were appointed this morning to visit some of the representatives of the foreign nations on the Fair grounds. We, this afternoon, called upon the representatives of eighteen or twenty of the foreign nations. We were very cordially received and some of them promised to be here this evening. Our Russian friend, Mr. Titoff did not talk a great deal with them but our French friend, Mr. Dadant, found opportunity to do a great deal of French talking. If any of those representatives are here this evening we would like to have them come forward or if they come in during the evening they will be presented to the audience by Mr. Dadant. Some of the foreign commissioners who were here a week or so ago have left the city so that we did not find some of the men we were after.

The President called on Prof. E. N. Eaton, of Chicago, to address the convention on

FOOD FRAUDS AND FOOD OFFICIALS.

Prof. Eaton—I regret very much I could not give this subject the attention which the importance of it and my interest in it would warrant, but if I had not been able to do a thing except come here this evening I should have done so to show my interest in this cause. It is a matter of pride with me that I have attended conventions of bee-keepers every year I believe for ten years, beginning in Minnesota and the Chicago-Northwestern Association in Chicago and two or three of the National conventions, and I want to say although I never owned a bee in my life I have received a great deal of benefit from every convention I have attended, not alone as a chemist, but I believe that meeting with you has brought me nearer to nature where I believe a man gets his best enjoyment and happiness; I have also been benefitted as a food chemist. Every food chemist should become acquainted with every industry manufacturing or placing food on the market. Unless he becomes familiar with the technical aspects of the question he cannot correctly interpret his own analysis. If the food commissioners and chemists had attended any one of your National, State or local meetings they would never have made the statements which they have made, and the falsehoods which they have distributed all over the country in regard to the adulteration of comb honey and the manufacture of honey by feeding bees glucose.

And this brings me to the subject of my paper proper. The subject is a rather odd subject for a chemist or one engaged in just the opposite sort of work from this. We are supposed to hunt out food frauds; we are working in the dark always. The chemist that manufactures is always working in the light while we are looking for adulteration. This time I want to speak to you about adulteration which does not exist. I want to speak of some of the crimes committed by food commissioners and chemists in the name and pay of the people.

It is certainly a pleasure to meet again with the bee-keepers and talk over with them subjects about which you are naturally interested. It is with no little pride that I have scarcely missed attending a convention of bee-keepers.

And from these conventions I have always derived some good, not alone in bringing me nearer nature in whose atmosphere I believe man obtains his highest enjoyment but in widening my knowledge of my own field of work—food chemistry—and the broader and higher aspirations it leads to, the protection of the public from impure and adulterated food.

The food chemist must understand the technical side of every food industry or he will not be capable of correctly interpreting his own analysis. If many food commissioners, chemists and even government chemists had received a training in bee-keepers' conventions, they would not have made so many reckless, untrue and hurtful statements regarding the adulteration of comb honey and the fraudulent honey obtained by feeding glucose to bees, and this brings me to the subject of my paper, a rather odd one for a food official, that is, the crimes committed by food commissioners and chemists in the name of public service and in the pay of the people.

The nature of their crimes is the wide-spread publications of adulterations which do not exist, to the detriment of parties handling legitimate goods. I may illustrate the statement by referring to incidents and facts which have come under my observation as a food chemist. First, in England, it was so widely spread that calves' brains were used to adulterate milk, and tests to detect them were given in all the early text-books of chemistry.

Chalk in milk and sand in sugar are other food frauds —to use the term in a new sense—which are ultimately indispensable to the editor of the comic magazine.

All the old food laws contain a long list of impossible things to find in vinegar, candy and sugars, and it must be the form of a galvanized stomach indeed who would glance at this list and not thank God for the food commissioner.

Lately we hear a good deal about harmful materials found in candy, and every little while a newspaper breaks out with a case of poison produced by eating these toothsome sweets.

The National Confectioners' Association, through their secretary, makes it a point to investigate every such case, and so far he has not found a bit of truth in any of them.

Then there is the wide-spread falsehood of the wholesale adulteration of honey produced by feeding bees glucose, and the still worse fraud of cheating the bees entirely and manufacturing honey, comb and all. All bee-keepers know how absurd these statements are, and how utterly impossible it would be to make them were the authors of the statement familiar with the manufacture of genuine honey. But one commission after another contributes an interesting article upon this subject to his local press and it travels from ocean to ocean. But while a food commissioner who is not expected to be a food scientist may make a blunder of this kind, occasionally, especially as it has passed current for so many years, it is less excusable in the chemist, and to a chemist must be attributed the first wide-spread publicity of the lie. It was as long ago as 1881 that an article appeared in the Poopular Science Monthly by the now renowned chief chemist of the United States Department of Agriculture, from which I quote the last paragraph:

"In commercial honey which is entirely free from bee mediation the comb is made from paraffin and filled with pure glucose by appropriate machinery."

Later when the paragraph had attained the most wide-spread publicity and the bee-keeper questioned his right to make the statements—the author explained that they were meant for a "scientific pleasantry," and even accused the bee-keeper of being dull in comprehension in not quickly seeing the joke.

The bee-keeper could not question the spirit or mood in which the article was written, but held that it was a sad subject to joke upon, and it is probably a source of regret to the chemist that his humor was not discovered by the hundreds of papers which up to this very day reiterate it.

But the statement was made, and its trail of trade damage is still in its wake.

What is the cause of these unwise statements? First, perhaps desire for publicity. Second, to alarm the public to a degree of food adulteration. Third, thorough ignorance

Sometimes it seems that a little exaggeration of the adulteration of food is not an unmixed evil, as the public will awake to the importance of protection themselves, yet, truth is the better guide, and especially where falsehood injures large industries as it has in honey, candy, flour and other food stuffs.

E. N. Eaton.

Mr. York—Dr. Eaton is the chemist of the food commission for Illinois, and he has attended a number of our conventions in Chicago and has talked to us on these subjects in which he is so deeply interested. I am glad, for one, we have such a chemist connected with the food commission who takes so much interest in honey and bees. I move that a vote of thanks be tendered him for his interesting paper tonight. [Carried.]

Pres. Harris—We feel proud to be honored with a man of this stripe who fearlessly comes before any organization, it matters not what, and tells the truth.

Mr. Reinecke—I think if you let a paper like this come before the Associated Press it will do a great deal of good.

Pres. Harris then called upon Mr. E. R. Root, to address the convention on

COMB HONEY CANARDS AND THEIR EFFECTS ON CONSUMERS.

Mr. Root—I intended to bring here certain papers that have been publishing certain statements with reference to comb honey. I don't think the members of this Association really know what has been published in the papers. You have had a sample of it, but that is mild compared with some of the stuff that has gone out during the last six months. I have a few papers that I will bring over tomorrow so that you can see them if you desire.

I wish to say before I begin the reading of this paper that you could not have anticipated my suggestions in regard to some things that this convention should have done, any better than you did this morning during the time I was at your session; and perhaps I had better leave out that portion of my paper as you have already carried out some of the suggestions. They tell about great minds going in the same channel, I am glad my mind has been along the lines that you carried out this morning.

I have one letter here, which, with the permission of Mr. Hutchinson, I will read a sentence from, as indicating what the scientific men in this country think of comb honey. You remember Prof. L. V. Allyn said something about comb honey being manufactured, containing paraffin and glucose, and something else, as if that was an evidence of manufacture. When that was called to his attention as a mistake he wrote to Mr. Hutchinson, and I will read this sentence: "The finding of a large percentage of paraffin and glucose in comb honey, and in addition reading many references from scientific papers, naturally leads one to suspect its adulteration."

I doubt if there is a more important question to come before this body of representative bee-keepers of the United States than the one before us now. The recent canards and sensational stories published in reputable papers and magazines about Yankee ingenuity, combs made of paraffin, etc., have deepened the distrust that was already existing in the mind of the public as to the purity and genuineness of our product. So persistently have these stories been circulated from time to time in the daily papers, especially in their Sunday editions, that consumers believe that it is an unquestionable fact that can not be successfully contradicted, that the beautiful little combs on the market are not the work of the bees, but the consummate skill of man. But these lies are not confined to current literature. If we turn to some of our standard works of reference, cyclopedias, cook-books, medical works, and the like, we shall be surprised to see how many of the writers of note, and scientific men who ought to know better, tell, in all soberness, that much of the comb honey on the market is manufactured by man out of paraffin, filled with glucose, and capped over by machinery. When these so-called authorities vouch for such statements in the standard works on the shelves of our homes, can we wonder that the comb-honey lies break out every now and then in the magazines and papers? Nearly every year has seen its quota of comb-honey canards; but the year 1904 surpasses them all. Let us glance for a minute at some of the leading publications that have given currency to these comb honey stories.

First on the list is the Ladies' Home Journal, one of the most widely circulated magazines in the world. The editorial writer, Dr. Emma Walker, based her information on statements made by the professors in colleges, and the writers for encyclopedias, etc., instead of going to practical men who should know, if any one, the truth about their business.

Then there was the Pittsburg Gazette and the Cleveland Plain Dealer, in their respective Sunday editions; The Sioux City Tribune and a dozen others, each one of them leading journals for their respective parts of the country, that have helped to give these stories a boost. Then there was Professor Allyn, of the State Normal School at Westfield, Mass. He sent a statement to the Springfield Republican, to the effect that he had a sample of manufactured comb honey which he analyzed and found to contain glucose and paraffin; and, worst of all, that it was on display at the great St. Louis exposition. A number of these papers, in response to a deluge of letter from bee-keepers and bee-journal editors, have published retractions. It should be stated, in this connection, that Mr. Frank Benton, of the Bureau of Apiculture, at Washington, D. C., has rendered no small service in getting corrections.

The Sunday papers are the worst offenders of the whole lot. They are nothing more nor less than cheap magazines containing a great deal of good as well as bad. A large amount of the stuff they publish is sensational, intended to be such, to make the paper sell. One large Sunday metropolitan journal, in defending its course in publishing such a sensational lie about comb honey, did so by quoting Barnum's old saying, that the dear people like to be humbugged. It admitted to our representative that it had no foundation in fact for the story it published; that it instructed its reporter to get up the biggest yarn he could, and he did. With this plain admission we got retraction, after a good deal of hammering, and a final threat to sue them for damages.

All that I have thus far said is familiar history to the average reader of the bee-papers. So frequent have been the appearance of these stories that the bee-keeping public has become hardened. While the bee-keeper himself is angered and disgusted beyond measure, he has been in the habit of forgetting all about it; then when there is a lull in the recurrence of the lies, he rests easy, thinking that no harm has been done. But the object of this paper is to show that a fearful damage *has* been done to the comb honey market, and you now demand the proof. Here it is:

It is well known, I think, that there was a large crop of comb honey in 1903, and a very light crop this year. If you will compare the markets you will see that there is no advance in prices. On the other hand you will see that the market is described as slow, easy, or indifferent; while last year, in spite of the large crop taken, it was described as firm. Had it not been for the articles published in some of our representative journals about manufactured comb honey, we might expect the market this fall to be unusually firm; but look at the quotations, and I think you will see that that condition does not now exist. Suppose, for example, that we had had a light crop last year, and a heavy one this year. The comb-honey lies that have appeared would have made the prices go all to pieces; but because of the scarcity of the general crop, we have been barely able to hold our own.

Of course, I do not claim that prices are now unusually depressed. The fact is, they have not advanced as they have on other products and I think this is because, very largely, the general public does not care to buy what it supposes to be glucose put up in fancy paraffin combs that are as perfect as the eye could wish.

Again: Bee-keepers who have peddled their honey around to customers direct are met on every side by the question, "Is your honey made by the bees?" In some cases it is almost impossible for the honey producer to convince them that there is no such thing as manufactured comb honey, even when he offers to give them $1,000 if they will furnish the evidence. In all the articles published in the bee-journals, I do not remember one in which the peddler did not refer to the distrust of the public as to the genuineness of his product. So difficult has it been to sell comb honey that some of our bee-keeping friends have been compelled to cut the honey out of the sections, mix it with a good grade of extracted, rig out as a farmer who has got a few bees, and, presto! that very same honey would go like hot cakes, without a question as to its purity. In the South chunk honey is getting to be quite a specialty; and it may be that in the North, in some localities where these comb-honey lies have got in their deadly work, our bee-keepers will have to cater to the chunk-honey trade.

In the course of our business, within a year we have hundreds of traveling men who call upon us to sell raw material of various kinds. When they see our crates of honey they slily ask the question if they may be permitted to know how we make the stuff, supposing, of course, we are headquarters for the product. Great is their consternation when we tell them that there is no such thing as manufactured comb honey, and that we will pay them $1,000 if they will produce a single sample of artificial comb, filled with glucose and capped by machinery, so close an imitation that it could not be readily told from the genuine. They tell us everybody out their way believes comb honey is manufactured; that they would buy honey, and would buy quantities of it for their own family use, but they did not care to pay a dozen prices for glucose and paraffin. Now, traveling men are a class of people who go over the entire country, and know pretty well what people think. It is their business to feel the pulse of the public, and they know it. When they say, as some of them have said, that there is not one person in ten but believes that comb honey on the market is manufactured, they are getting painfully near the truth; and the very people who should know this truth are the bee-keepers themselves.

But this is not all. Two or three of the prominent commission houses in our leading cities have wrtten us that they used to sell comb honey by the carload where now they sell it by the ton. This was before the days of the honey-comb lies. Other commission men will tell you that there is a strong distrust on the part of the buying public as to the genuineness of the ordinary comb-honey market.

But you may wonder, then, why people buy comb honey at all if they believe it is manufactured. Fortunately not every one believes these lies, but those who do, buy it just as you and I do canned fruits and vegetables which we are afraid are preserved with deleterious chemicals such as formalin and salicylic acid.

But there is a partial foundation for these comb honey lies, and it rests somewhat on the fact that there is a large amount of inferior comb honey in the city markets. It is dark in color; or, if not dark, it is off in flavor. People buy it. It does not taste like white clover for which it was sold; then they shake their heads doubtfully, and say, "There, I told you—this comb honey is manufactured. It does not taste like the honey I used to get on my father's farm."

It is my opinion that dark and off-flavored honey, if we except buckwheat, which has a strong and positive demand in the East, should not be put in sections, but extracted, and sold to the manufacturing trade—the bakers and the confectioners.

It is also my private opinion that, were it not for the general belief that comb honey is manufactured, we should get from a third to a half more for our product. The local bee-keeper who peddles his honey around home, who bears an excellent reputation, as such people generally do, who has taken pains to educate his trade as to the purity of his product, can usually get from a half to a third more for his honey, because his trade knows that his goods are directly from the hive. In a way, then, the comb-honey lies help the bee man who sells his product within a hundred miles of his home. But how about the large class who cannot take the time to sell their honey, but must get rid of it with the least expenditure of time possible by shipping it to the city markets? These constitute a class who are in the great majority, and should be protected.

Having now stated the actual conditions, the question naturally arises, "What are you going to do about it?" We have been hammering at the newspapers, and getting retractions, you say, and have been partially successful, and still the lies go on. The trouble is, we *bee-keepers are not half aroused to the danger* that confronts the comb honey business. We have not hammered at the newspapers half enough. Every time these canards appear in public, the purveyor of them should be deluged with thousands of letters. Force of numbers is what counts in a campaign of this kind, as recent experience has shown in the case of the Ladies' Home Journal, Pittsburg Gazette, and some other periodicals of that kind. If the bee-keepers of the country depend on the editors of bee-papers and manufacturers of supplies to get retractions, they must make up their minds to keep on with these low prices. All the bee-papers will do their part if the subscribers will do theirs. You see the point is right here. When one of these offending editors or publishers has letters coming to him at the rate of a hundred a day for the matter of two or three weeks or a month, he begins to think something will happen, and that if he cares to hold some of his clientage, he had better make a retraction. If those letters are courteous, appealing to his honor as a man, they will have ten times more effect than if he is abused and called a fool.

I recommend further that more bee-keepers seek to develop their home markets. Distribute more leaflets direct to their trade. The leaflets show the character of comb honey, tell about the different flavors, and then go on to show that $1,000 has been offered for a single sample of manufactured comb honey that is a close imitation of the genuine product of the hive. Some leaflets published by Editor York, of the American Bee Journal, are excellent. Copies of them can be obtained, probably, at this convention.

Nor can we stop right here. This convention should take hold of this matter, should pass suitable resolutions urging the Board of Directors of this grand Association, of which we are so proud, take hold of the matter in a way that will mean something. The time of talking and crying about the matter is past. What we need now is action. I would suggest that the Board of Directors be urged to set aside a certain fund, which can be used to pay some competent person not only to get retractions, but to write interesting and original articles for magazines which directly and indirectly tell how comb honey is produced, and which will show conclusively that there is no such thing as the manufactured article so much hawked about in the papers.

In this Association we have a number of men who are perfectly competent to do this work under the direction of the Board of Directors. It is not enough that the articles be written, but that a representative from the Association itself be sent direct to the offending publisher or editor, and explain to him the facts, taking along some samples of comb foundation. In the case of the Ladies' Home Journal, Mr. W. A. Selser, a member of the Board of Directors of this Association, was authorized to go and see the publisher, and explain the facts. He was nearly discouraged, but he persisted until he got something that was a good deal better than nothing. The officers of this Association are now scattered all over the United States; and the Board of Directors could, at a very small expense, send one such officer to the paper publishing such lie, and, if possible, secure a retraction and correction. In the meantime, the bee-keepers should act in concert, getting their subscribers to deluge the publisher in question with letters of protest.

I suggest, further, that the Board of Directors appoint some one to visit the people who make "boiler-plate" matter for the press. By this I mean cast stereotyped matter which is sold to the small publishers at so much a column. An interesting story or sketch could be written up; and if the boiler plate people will accept it, the facts about comb honey could be circulated over the entire country.

I should like to suggest further that every member of this Association, as occasion may present itself, invite his local editor down to see him. Show him an extractor and the comb-honey supers; let him examine pieces of foundation, show him how it is used, open up the hive, then get him to make a little write-up if he will; but be very sure that he sees the proof before it goes to press. With the best of intentions he may make a bad matter worse. For instance, he may talk about comb foundation as artificial honey comb, how it saves the work of the bees, etc. His idea is correct enough, but his use of terms is unfortunate. Within a year a reporter of one of the large metropolitan dailies called at the home of the honey bees. We took occasion to tell him all about comb honey, but particularly requested that an advance proof or type written copy be submitted to us before it was published. This the reporter agreed to do, but he must have forgotten it. But imagine our surprise when, in the Sunday edition of his paper, comb foundation was confused with artificial honey comb; and this was mixed up with another statement that there was no such thing as manufactured comb honey. A slight change in the wording here and there would have made an accurate statement, acceptable to bee-keepers and creditable to the reporter and publisher alike.

I wish to suggest further that the President of this Association appoint a press committee whose business it shall be to wait on any reporter who may come into these meetings, and furnish such reporter with these facts, and that they get, if possible, a proof before the matter goes before the public. The reporters are bound to come here; and if they are not intelligently and carefully waited on they will get a mess of mixed-up stuff that will do us more harm than good.

There is just one more expedient that can be employed to bring these publishers to time who will not retract, and that is, a suit for damages. The A. I. Root Co. was about to begin an action against a daily during the past summer. We had gone so far as to instruct our attorney to begin proceedings. We wrote the publisher just once more, asking them what they were going to do, if anything; that our business had been damaged, and that we proposed to take the proper means to protect ourselves if we could not get redress in any other way. In about a week we secured a very handsome retraction, and then the publishers wrote in a very humble way, asking if that was satisfactory.

Our attorney tells me he believes the bee-keepers of the country could successfully bring suit, in some cases at least.

and I am of the opinion that some such action should be begun. The probabilities are that in nine cases out of ten the offending publisher would accede to our demands before actual proceedings could be instituted.

But suppose he does not. A case in court would attract attention, and would be heralded over the country, and this of itself would show to the newspaper publishers, as well as to the public at large, that there is no such thing as manufactured comb honey, and that, if they took a hand in publishing or rehashing these lies they might have to pay dearly for their experiment.

It should be understood that an action cannot be sustained in every case. A great deal depends on the nature of the allegations in the first place.

There is something more that can be done; and that is, for bee-keepers individually to offer a reward for a single sample of manufactured comb honey. It does well enough to say that the A. I. Root Co. will pay $1,000 for such sample; but who is the A. I. Root Co. to the ordinary consumer of honey? But if the bee-keeper himself, especially if he is known to be responsible to that consumer, can make an offer of $25, $50, or even $100, such offer cannot help silencing the purveyor of the lies.

Ernest R. Root.

Mr. Abbott—I move that a committee of five be appointed by the chair as a press committee representing the various localities of the United States whose duty it shall be to act without pay, to look after all matters pertaining to the interest of honey in the public press. Mr. Root has suggested an excellent idea. There is a press committee here, but their duties cease at the close of this convention. If we had five people in five localities who would be co-operating and felt it their duty to look after these things, and to co-operate with the Board of Directors, and when in their immediate locality to write an article and turn it over to John Jones, or whoever it is, and let him put it into the paper in his own name, I think it would be a good idea.

Mr. Scott—I had in mind it would be well to have more than five. The United States is a big territory, and it occurred to me that five could not very well gather all of these statements. I wish to say with reference to the suggestion offered by Mr. Root that it is very good, but if the Association gets an article out why not have that printed in large quantities and supply all the honey-dealers with it. Everyone, especially those who are members of the National, could use them to the best advantage, even if we had to pay half the price for printing. Personally, I feel to present a printed article of that kind in the name of the National Association would have much more weight than if I did it on my own responsibility. I have so much faith in that that I would take 5,000 of them right away.

Mr. Abbott—I will enlarge my committee by permission of the seconder, and make it fifteen instead of five.

Mr. Dadant—I believe it would be advisable to have the editors of all the bee-journals in the United States on that committee. There is no one who can get hold of these slurs published in the press as well as the men who are publishers themselves. They are more likely to read all these items or to have them sent to them by their subscribers than anybody else. We bee-keepers who only read the bee-journals and do not get hold of the general press would not notice these things as well as the bee-journalists, and it seems to me those men ought to be on that committee, and they can act for us. Those things ought to be crushed out.

Mr. Whitcomb—In my experience I find that the stories of adulterated honey do not come through the newspapers but through the customers. I find the grocery men taking a very inferior comb honey and pointing it out as good. The customer takes the cheap honey at a good price. I find that in Lincoln and Omaha. One of the tricks of the grocery trade is to sell to the customer a poor, inferior section of honey, half capped and half filled, at the price of a good section.

Mr. Reinecke—If this was put in condensed form and each of us could scatter them, and could get them in the local papers, it would have more weight than it would in the bee-journals.

Mr. Andrews—I would like to see this include the whole meeting of the National convention, and let it go into Canada and Mexico if necessary.

Mr. Van Dyne—There was a motion acted on the other day and referred to a committee, and that committee did not have the written resolution with them in their session and the latter part of it was passed over, and that referred particularly to this same question, that this convention ask every member to go to their county paper and ask them to publish this reward of $1,000 for two boxes of comb honey filled by hand or by machinery in the United States. The fact of merely publishing this offer would settle the whole business.

Dr. Bohrer—Let your committee be fifteen if you wish it, but I want every bee-keeper to consider himself a committee of one to attack those charges through the local press.

The President put the motion to appoint the committee, which on a vote having been taken was declared carried.

Mr. Root—I would like to make a suggestion and that is, that the editors of the bee-journals be left out of that committee. There is no doubt but what the editors will do their part; they are very much interested in this question; but include other men. What we want is to give these things a good hammering from different sources.

The President called for the report of the committee delegated to attend the Pure Food Congress.

Mr. York, on behalf of the committee reported that he had attended the Pure Food Congress, but had arrived there before they had begun their session; that he had met the Secretary, Mr. Allyn, and had given him the resolution and acquainted him with the facts, and that Mr. Allyn had promised that he would read the resolution the first thing after the opening of the session. The report of the committee was then received and adopted, and the committee discharged.

The President called upon Dr. Miller for a song, to which Dr. Miller responded by singing "I'se One of Those Happy Bee-Mans," which was received with applause.

Mr. Johnson—In St. Louis this morning I found a man on the corner of 27th and Broadway who wanted to buy some honey, having seen the badge on my coat, and he said, "Do you have pure bee-honey?" and I said, "You bet I have." To show you how superstitious he was he ordered six sections. He had seen that article in the Ladies' Home Journal.

Dr. Drunert—Wouldn't it be much better for us as an organization to authorize our officers to say that we would sue every man and editor for damage, that was not able to prove his assertion as to artificial honey? That would be a warning to all editors to go to the bottom of it and try to find out and see it they could prove what they published.

Pres. Harris—Mr. J. T. Adams, of Alabama, has presented a honey souvenir to this convention and at this time I wish to refer the same to our Committee on Resolutions.

Mr. York—I would like to refer again to Mr. Root's paper which I think was a splendid one. With reference to manufactured comb honey so-called, I have been thinking a good deal about it, and have been wondering if it would not be a good idea if every member of our Association, some 2,000 strong now, would, whenever they see anything published about manufactured comb honey, send a marked copy of that paper to our general manager. If this press committee is appointed he could then refer it to a member of the press committee in the locality from which the paper came, and that member could then take up the matter with the publisher and editor. It seems to me every member of the Association ought to be requested to do this, and they ought to have some one place to send all these marked copies. We, as editors, get a good many of them, but some do not think to send them. The general manager, if it is sent to him, can refer it back to the press committee and to the publishers of the papers. I have also thought when he heard of anything of this kind he should take it up in the name of the paper and write the editor or publisher of the paper, and tell them that he represents this Association, and ask for a correction, and if that is not forthcoming, then through the bee-papers notify the members to write that editor and snow him under. I believe the editors of the daily papers would pay a great deal of attention to that. It seems to me if the matter were dealt with in this way we would get retractions with very little trouble. If finally they refused to retract, then threaten to sue them. I think we ought to have some system about this thing and work it up gradually. The General Manager should at the same time, when he writes to the publisher of such a canard, send him some of the printed matter we have talked of getting up. Prof. Benton is going to get up a bulletin, and the board of directors is going to get up some facts. Let the General Manager mail them copies of these. After getting all that information I am satisfied that the average editor would be glad to make a retraction and will undertake not to do it again.

Mr. Clark—A great many of these comb-honey canards get started from the fact that the average member of the press is not familiar with the matter. If we had some way to reach the local as well as the general press and get these fellows to retract, I believe we would have no trouble. This committee that has been suggested, I believe would co-operate with the National. Another thought that occurred to my mind was in regard to the syrups being fed to the bees and their storing it away. The production in that way of anything that resembles natural honey never has in my experience been accomplished. You can't any more produce honey that looks like natural in that way than you could by taking a hen and tieing her down onto her nest undertake to hatch out a "set" of chickens.

Dr. Miller—With regard to one point, that of trying to get a proper sort of retraction, we had two instances lately in the Ladies' Home Journal, one with regard to honey and the other with regard to a proprietary medicine. The two retractions were very unlike. In the case of the honey there was this statement and that statement, and part of it had no bearing on the subject at all, but the whole thing had the look that perhaps honey was not adulterated, that perhaps comb-honey was genuine; that was the general impression. One of the things, and the strongest one, perhaps there, had no bearing whatever upon the subject, because it referred entirely to extracted honey, and extracted honey was not in qustion at all. With regard to the proprietary medicine it was a clean, solid, uncompromising retraction of the whole thing; an abject apology. I tell you what I think made the difference. I think the proprietor of that medicine went to them and said, "You retract that in the most unqualified manner or we will sue you and collect from you all we can." I don't know enough about this thing, but I suspect that damages might be obtained from some one of these, and if in any single case a suit were instituted and damages obtained, that would be a thing that would tell more than all the letters that would snow them under. I believe if our General Manager could obtain damages in one case from any one of these publishers, or even a retraction, it would help us in the other cases.

Mr. Abbott—I fear some of our members have a wrong idea about suing. I want to say that the general manager of this association has not any standing in any court of the United States; that the general manager of this Association cannot sue anybody. This Association as an association has no legal standing in any court in the United States, because it is not a corporate body. If we want to be able to sue as an association, this body must be incorporated. The individual person damaged must show the damages. We are not as a body an entity and you cannot damage a thing that is not an entity in law.

Dr. Miller—There was an incorporation. Isn't this the thing that was incorporated?

Mr. Abbott—If this body is incorporated, and has a standing in law, then this body can sue, but we must not lose sight of the fact that it has no standing unless it is an entity in law. All the suits made by the general manager are not made in his name but in the name of the individual injured, and the general manager must stand behind him and you must stand as individual men. In this case it was in the name of Dr. Pierce, and he said, I will sue you for $200,000, and they knew he would keep his word, but they do not pay any attention to this Association because it is not incorporated.

Prof. Benton—I wrote to Ernest Root that the time had come when a suit should be instituted when there was a good case, and I was in favor of sensational things, yellow journalism in general—the most successful thing that you could have to go from the Atlantic to the Pacific that would reach the journalists. That is what we want; and when there is a good case somebody should go right straight to the man and say, "We have $2,000, and there are men that will bring forward more thousands, and we will put the thing right through if you don't come out squarely and retract."

Dr. Bohrer—In regard to this body not being in a position to be sued or to sue, I agree with Mr. Abbott. If it is deemed necessary to have it incorporated let us do so. I move this body be incorporated.

Mr. Weber—I second that.

Mr. France—I don't like to occupy a great deal of your time, but as an illustration, I was asked, as you all recollect, to reply to that article in the Ladies' Home Journal on behalf of your Association. I did so to the editor, and it was suggested that unless retraction in some form was made, satisfactorily, it might be possible the Association would take the matter up in the court, and I got a reply immediately, "Are you an incorporated body?" I had to say "No."

Mr. Abbott—I wish to say to you that you have to go a little cautious about these things. There are two sides to all questions. Sometimes it is an advantage to be an entity and sometimes it is not. If you are nobody you are not likely to get licked. If you are somebody you may drop up against a fellow that will give you a fearful licking. You are responsible for what you say and do when you get to be somebody. To get to be somebody we must get to be somebody at some special place; we must have an office and be identified with some special place under State laws. Are you going to be incorporated? Now most of them go to New Jersey when they want to swell their stock. Will you go to New Jersey, or will you work it under the laws of Pennsylvania where you can inflate and blow and bust anything in the shape of a trust, or in the State of Missouri where they are pretty hard on corporations, or where do you intend to incorporate? Mr. Hershiser is better prepared to talk on this than anybody, but I spent two years studying law, and I got all these fool notions in my head. I think I am correct, but if not I will stand corrected.

Dr. Bohrer—Couldn't it be done under National law?

Mr. Abbott—No, sir; there is no such thing as National incorporation.

Dr. Miller—I thought that was a pretty good speech I made a while ago, and I don't want to lose it all. If we can get the incorporation then the thing won't fall to the ground. In my answer to Mr. Abbott, I was acting on the idea that there had been incorporation and there was, but that was something else and this thing is something different, and if we get as near doing what was done before, perhaps that will be well, and if we could be incorporated in the State of Illinois, being central, I don't know as there would be anything better.

Mr. Pressler—I would like to move that this matter be referred to the proper committee, because it is a delicate matter, and should be carefully considered in the committee room.

The President put the motion, which on a vote having been taken was declared carried.

FEEDING BEES TO PRODUCE HONEY.

Mr. Rhees—The idea has gone out that it was possible that honey-comb could be filled with some substance besides honey by the the bees themselves. I don't think this thing is possible for several reasons. I tried to feed my bees some overheated honey and they wouldn't take it, and I very much doubt if they would take glucose under any circumstances; and from what I have read I don't believe that honey-producers have made a success in even getting honey stored in the honey-comb. So far as sugar is concerned, in my locality the wholesale price of sugar is a great deal higher than the wholesale price of honey, and no sane man would think of feeding sugar and having it stored for honey. No bee-keeper will ever make a success of putting honey on the market unless he is a man of sound judgment. I think this idea that has been advanced, that it may be possible for people to feed a mixture to the bees and have them store it and then sell it as comb-honey should fade, it is impossible. It is impossible for me to buy sugar at six cents a pound and go to all the trouble of feeding it, and then sell the honey at five cents a pound.

Mr. Abbott moved, seconded by Mr. York, that the committee to consider the matter of incorporation consist of five members appointed by the chair.

The President put the motion, which, on a vote having been taken, was declared carried, and the President appointed as a committee Messrs. Abbott, Hershiser, France, Benton and Miller.

Dr. Miller—In reference to the remarks just made in reference to making comb-honey from feeding sugar we must be a little careful and not go too far, and it will hardly do to say that we cannot feed sugar and get comb-honey because the price is too much. I can feed sugar and get comb-honey made and the price of comb-honey will be nearly three times as much as the price I can get sugar for. I don't know whether there is any profit in it or not. I am simply stating that the price of comb-honey may be two or three times as much as the price sugar is now.

Mr. Kretchmer—I would like to ask the doctor if he ever estimated the actual cost of feeding sugar in building comb?

Mr. Rhees—Dr. Miller and I live in two different sections of the country. We have no beet-sugar factories in our county in Utah; we have land that is capable of growing beets in that locality, but the sugar people are working for their own interests. The wholesale price of honey is about six cents a pound, and I am offering my honey crop of 6,000 pounds at five and a half cents; the package cost me three-quarters of a cent. That is extracted honey. If I were going to feed bees anything, I would not feed them sugar at six cents a pound, I would prefer to feed them the honey. Take California, Colorado, Idaho, Utah, Nevada and Arizona and the figures will stand the same.

Mr. Abbott—I want to go on record again in this statement. A few years ago a noted professor and some others talked this subject and discussed it, and I asserted then, and I assert now, that there is no similarity between the product produced by feeding sugar to bees and making honey, and the natural honey; that sugar put into combs by bees is sugar syrup, and nothing else, and not honey; I defy anybody to prove it is honey or anything like honey.

Mr. Kretchmer—The syrup is entirely different from the nectar, and can easily be distinguished. Two years ago I gathered a small bunch of bees in the fall and I tried to experiment. I put them in a hive and gave them warm sugar, stirred it up well together with water, then I set it right before the bees and they came out nicely and ate it, and I may state they produced the whitest comb that you ever saw in your life, and I think before the other bees came robbing there was honey in there. I would state the acid the bees mixed with it keeps the honey, and that honey is just as good as if taken out of the flower.

Mr. Stewart—With regard to the statement made this morning, that glucose could be fed and made into the form of comb honey and sold, I have had a little experience on that line. I have taken glucose in the scarcity of the honey-flow and tried to get a colony of bees to eat it. I tried it in a half a dozen different ways. One trial was I took clear white glucose that the grocery man gave to me, and I spread part of it on top of the brood-frames and marked that hive. I looked every day for five days to see how much of that was eaten, and I couldn't see that it was reduced in quantity at all. I took my knife and tried to scrape it off and it was like so much India rubber. Then I took some of it and weighed two quantities, putting in part of the quantity with honey and part with glucose. I kept increasing the quantity of honey until I got it at least half or two-thirds honey, until I got the bees to eat it. So I say that clear glucose cannot be given to the bees and be made to appear in any manner as comb honey.

Mr. Root—I have conducted almost the same experiments with the same result. I took glucose and daubed it all over the front of the hive, and daubed the bees up so that they would clean each other off, and they wouldn't do it; I put it out in the yard and put the honey with it and I had to make it about fifty percent honey before the bees would touch it. Very recently the Brooklyn Eagle editor came out and said bees could be fed glucose. Two of us got after him pretty hard and the result of it was he came out in a subsequent statement and said it could not be done, that he had a bee-keeper try it.

Mr. DeLong—I gave a statement at the convention in Nebraska in 1896 in regard to an experiment I had tried to feed bees on glucose, when it first came out; it was five or six years ago; I got some of the glucose that was very nice and white. I thought it was granulated, but it just kind of floured down someway. I thought I would dilute it and have two gallons of nice white syrup instead of one, and the next morning the whole of the stuff had decomposed, and the dog wouldn't eat it. I want to say that the reason a bee can't eat it, and won't eat it, is because it decomposes as soon as it mixes with the larvae, and you can't fool bees; they know what it is. You couldn't feed any of this audience on stuff that would decompose in a few minutes and make them sick and almost kill them. This old nut that has been cracked, about making comb honey, this Association ought to set that down as a famous old lie, and those intelligent people of the Home Journal ought to know better than to publish such stuff. I eternally hate this glucose; it will kill the young bees in the larvae state when it is fed. There is one miserable packing company that puts up a nostrum, I call it, with a little piece of comb in it, and call it pure California white clover honey. Those California folks know how much white clover grows out there. I said, that is a nostrum, and there is no honey in it. There are very few bee men if they are honest (and there are not many of them that are not honest) that put up any such stuff; and I think this Association ought to pass a resolution that this old thing of manufactured comb honey is a notorious old lie. I told those folks up in Lincoln that if we wanted to, if we could make 200 per cent on feeding glucose to the bees, we couldn't do it; we would kill all our bees. It is as bad as foul brood.

Mr. Dadant—The remarks just made have suggested to me the idea that our convention should pass a certain resolution as to their opinion in regard to manufactured honey or adulterated honey, and I wish to present this resolution to be referred to a committee:

"Resolved, That this convention asserts that no artificial comb honey has ever been or can be produced. That there is no profit in feeding anything to the bees to fill the bees to be sold as honey. That the only successful adulteration ever made has been by liquid honey out of the comb."

This is a matter I think we can assert as a body, and, I believe it will do a great deal of good.

The President put the motion which, on a vote having been taken was declared carried, and the resolution referred to the commitee on resolutions to report back.

Dr. Miller—At what price can I produce what appears to be comb honey by feeding sugar to the bees?

Mr. Stewart—We don't want you to feed any sugar, Doctor.

Mr. Reinecke—We found it necessary one fall to feed our bees, and we found we didn't get enough honey to pay for the sugar.

Mr. Hyde: I do not believe anyone in the house can answer this question, I have asked Mr. Scholl, and if you request it, he will conduct an experiment next summer to arrive at a satisfactory conclusion.

Dr. Miller—I move that we thankfully request Prof. Scholl to make thorough experiment upon this subject. I know he is competent to do it. [Carried].

Prof. Scholl—I am one of the bashful kind of little fellows, and a little afraid; if I was a little bigger I might get up and do some talking, but the way I always do, I let my bees buzz and I do the looking on and let them work for me; and when I get into a convention I let the other people talk, and sometimes I take notes of things, and when I get home I sometimes experiment and that is what I am going to do here. Instead of talking I am just going to listen and hear what you are going to talk about, and then later on maybe I can tell you all something. I don't know whether I could tell you anything now or not. Maybe after I get through my excitedness I will buzz a little while.

Fifth Session—Thursday, September 29:

The President called the convention to order at 9 a. m., and Dr. Miller offered prayer.

Mr. Abbott—The committee on incorporation has looked the matter over carefully, and they can simply ask for more time, and they desire that the committee be continued until the next annual meeting, when they will be prepared to present a thorough report. This matter is of vital importance, and should not be done hastily.

On motion of Mr. York, seconded by Mr. Hyde, the special committee on incorporation was made a permanent committee to report at the next annual meeting.

President Harris then called upon Mr. Brown, of California, to present his paper on

THE COLLECTIVE DISPOSAL OF OUR PRODUCT.

Mr. Brown—I have touched this matter very briefly. It is a subject that deserves a great deal of attention. We could not do justice to the subject here in a place like this, so I have only jotted down a few points which I hope will start the ball rolling in the right direction.

The individual disposal of our product is one which is well known to us all. While it has some advantages, it has many disadvantages and unsatisfactory results. Perhaps it would not be out of place to mention a few conditions which call for this united action on the part of producers of honey to market their product collectively.

The Good Book tells us, in II Timothy 3:2, "For men shall be lovers of their own selves," and we find that the buyers of honey, and the manipulators of the honey market, are quite apt to be included in the class mentioned in this statement. Another one of these conditions is, that the large consumers of honey, those that use quantities of from fifty carloads upward per annum, have united their energies with the buyers and commisison brokers. This has brought about an effect that the price of our product, as individuals, is largely left to what they are inclined to quote us. For instance, one who offers a carload of honey to the market at San Francisco, which market is based upon the Eastern market, after being quoted his price, the firm who makes its quotation, is not satisfied to allow the seller the privilege of trying to secure a better price in the East, but will immediately wire his offer, with other information; to all the other links in this great chain of compulsion, located throughout the honey centers of the United States. And vice versa. The offers and quotations of the East are wired to the West, and all are agreed to stand firm on one common price, until competition, which is the "life of trade," is totally obliterated.

Really, the only competition that exists today in the honey market, is created by producers who individually market their honey. I think perhaps this phase of the question is so well understood by us, it needs no further comment here, and we will now turn our attention toward the subject of this paper.

It is quite evident that the bee-keepers of this twentieth century are looking forward to some escape from this Juggernaut, which is crushing the life out of trade. And it is quite apparent that a spirit of co-operation does already exist, which is the only thing that can bring about this change from individuality to collectively marketing our product.

It is a fact, however, that among us there is a tendency to wait to see the plan developed before we venture into the project ourselves. This is the most dangerous ground we can stand upon. One can readily see that after he has produced a crop of honey that can be sold upon the general market for, say $1,000, and can get his money without delay, that he will hesitate to turn the selling of this to new and perhaps untried channels; and in order to succeed, we must develop a channel in which every producer among us will have full and complete confidence. It must be made up of those who have made a success of this very kind of work, and who have experience and talent. They must be people who are renowned in this line, and of whose standing everybody has a general knowledge. Also they must have a standing in business which they cannot afford to jeopardize for the paltry sum of a few dollars which they could make by being placed in this position of trust.

Let there be a board of directors made up of this class. Let the number be five. Allow them a salary to pay them for the time which they will spend in overseeing their employed managers. Give them power to open a central office, in which their manager will receive from local. organizations, crop reports, samples of honey, amounts ready for shipment, and correspondence of every nature that will be directed to a business of this sort. Then let the smaller, or local organizations, with which the country is already well covered, use this general or National Honey Producers' Association for their market. This will make a gigantic brokerage system within our own ranks, one in which one and all can trust. Then it will come to pass that we will be the market, we will be the head and not the tail. We will be able to quote a living price for our product and realize as much.

The points mentioned so far in this paper are readily admitted by all, but the question as to how we shall arrive at this point of success, is the one that now confronts us. The only way is to launch out. There was never a boat that floated until it had an opportunity. The time is now ripe and the opportunity is ours. Let this convention appoint a committee who will name the first five directors who will draw up the by-laws and report before this meeting adjourns. Let the glad news be sounded from this center, and the birth of the baby, which should be received in every quarter with much joy. Then every locality where honey is produced should be encouraged to organize, with the view before them that they are to patronize the National Honey Producers' Association for their market; and once in the stream we will move out in the breeze and lift our sails one by one as the occasion demands.

The organization should be a stock company, place the capital stock at $50,000, and sell only to organized companies and associations. Limit each such company or association to one share for the company or association, and an additional share for every 25 members thereafter. Place the par value at $100 per share, and the voting will be done by these associations or companies governed by a vote to each share. In this way we can always keep the management within our own control. No one person, or for that matter a few, can buy up the controlling interest in the association; dividends to be declared upon net profits, derived from the commissions made in the business, funds for sale of stock to be used as capital in which to establish the business.

In conclusion, allow me to add, that we should lose no time in starting off this important work. We are losing far too much money each year to remain silent and appear to be satisfied when, as a mater of fact, we are not. The buyers and wholesale merchants have organized against us, and our only chance of escape now is through the same channel—organization. Let us be wise, and use our freedom while we find a disposition within our rank to do so.

F. E. Brown.

Mr. Diebold moved, seconded by Mr. Andrews, that the chair appoint a committee of five to devise methods for co-operation in the marketing of honey.

Mr. Andrews—We have found in California from one year's trial that we could save the price it cost us to organize. We paid five cents per pound membership, and we found we got back all we paid into it the first year. We found we could buy our supplies through this organization enough cheaper to pay all our expenses. We found another thing in marketing our crop, the great majority do not know when they are offered all their honey is worth. When we were ready to place our honey on the market the association had orders for something like eight carloads. The members would not turn their honey over at the price the association had fixed, and consequently they had to pass those orders by. Many of them held their honey over a year and took considerably less than we had been offered at that time. Many of the men need money right at the time the crop is harvested, and we need to provide some means whereby those men can draw on that honey and get money at a low rate of interest.

Mr. Abbott—I am greatly interested in this matter. The query comes to me why this association should stand bv at the birth of a lion cub to eat up her own children. It is strange to me we should take the time of this organization to organize a financial institution that could not possibly be a part or parcel of this Association. A great deal of this seems to sound very nice. For instance, we were told that oranges were the same price in California as in Missouri. I stand here to say as a student of political economy that transportation is a part of production, and that declaration is incontrovertible. Every man that brings an article to the place of consumption enters into the production of the article, and if transportation is a part of production it is all fallacy to talk about oranges being worth the same price in California that they are in the State of Missouri; and that is the complaint that is made about machinery in the United States and in foreign countries; even sewing machines are sold for less money in foreign countries than they are sold for here, and it is unjust and unfair. The paper further tells us that these buyers have combined, and these supply dealers have combined, and they have all combined, and there is a great octopus with its mouth wide open sweeping over the country endeavoring to consume everybody and everything it comes in contact with. I ask you to point out the man that has made these combines? Show me where the men are that represent the honey combine in the United States. There is not any such thing in existence. I believe we can drift on towards socialism and make a social business institution, but so far as I am concerned individually, I want to say the National Bee-Keepers' Association stands for the individual bee-keeper and not for a financial combine. I see no reason why we should organize another society to destroy our society. Let this Association alone as it is, a great brotherhood of people working for the common interest of all the bee-keepers of the United States—farmers, specialists and all.

Mr. Brown—This convention in Denver, two years ago, appointed a committee, and I was one member of it, to draw up plans by which an association of this kind might be formed. It is a fact that that committee did go out and did report at our last convention in Los Angeles, and the committee was appointed again, of which I was made chairman, and I say it is proper at this time and in this place for this thing to be brought up. It is not necessary for this Association to be converted into this; it is not the intention that it should be so; but this is the place for us to take up this matter and protect ourselves against this gigantic honey concern, this combination that is combining and is crushing the life out of the honey market. Now I know whereof I speak when I speak about this formation, and I can put my finger on them, I can tell you exactly who those people are. It is not well for me to give it out to the public, and have it go into the press as to who these people are, but they do exist; they do control affairs; they do control our honey market today, and the thing for us to do is to organize and meet these things with organization, and I say it is properly in place before this convention. This matter comes up today right in perfect line with our work. Let us lend a helping hand to this new organization, and let it not interfere in any way with this Association.

Dr. Bohrer—I hope the motion to appoint such a committee will prevail, but like Mr. Abbott I do not want to create a monster that will gobble us all up. That some kind of organization is necessary is a fact, but be careful how you organize.

Mr. Dadant—I cannot agree with Mr. Abbott in the matter of the propriety of bringing this before the convention. There is no greater interest among bee-keepers than the selling of their crop, and where are we to discuss our intrests if not in our convention? Since I have been here I have met a half dozen of our bee-keepers who have asked me, "What are we going to get for our honey?" "What shall I ask?" What answer can I give them? The market prices are set by an organization. These people are organized, and they are going to last; you can't kill the trusts; you can regulate and tax them but you cannot kill them. The only thing for us to do is to organize, and you may call it a trust if you please. I hardly think we can start with a capital of $50,000, but I think we can and should start with a committee that would tell our members, when they want to know it, at what price they should hold their honey. They can do it. If we simply stay together, and we will some day, we will get our prices just the same as the Tin Can Trust, and can probably produce honey cheaper then than we can today by being organized.

Mr. Coggshall—I want to take issue with Mr. Abbott. There is a combination against honey producers. I went into Syracuse and wanted to sell honey to the bakery there, and they said, "You submit samples and send them to Chicago, and then you will get your price." A combination, as sure as you are born.

Mr. Stanley—If there is any general combine in the honey business I have failed to become a member, and I believe Mr. Weber would testify in the same way, and perhaps there are other large buyers. Perhaps in some local way the merchants may be able to combine to fix the price. I believe I would have found it out if it was extensive.

Mr. Hershiser—Evidently the gentleman who last spoke is too small in the business to have been a member of these combinations. I know these combinations do exist, and exist in the shape of the National Biscuit Company. I had occasion a year or two ago to sell a carload of honey for a party in Arizona, and I submitted samples of the honey to the branches of the National Biscuit Company, and the samples were sent to Chicago to be passed upon by the purchasing agent there, for all the branches of the Buscuit Company, and the price was fixed. and there was no deviation from it. There are a lot of small individual buyers that I suppose do not belong to this organization.

Mr. Stanley—I should have said I handle almost exclusively comb honey, and we handled something like 300,000 pounds of it last year.

Mr. York—I think perhaps some of us misunderstand the paper. I think I did. Mr. Brown said there was a sort of combination that controlled the prices of honey. I gathered from that that there was a combination of honey dealers that was buying and selling honey. The National Biscuit Company does not buy and sell honey. They buy for their own purposes. As to Mr. Coggshall, if he does not care to sell his honey at their prices he need not do so. I know the National Biscuit Company bought nine car-loads at one time, but I wouldn't consider them a combination to fix the price of honey at all. They are simply buyers for their own use.

Mr. Hardy—There is one thing about this thing that I don't understand, this matter of assigning stock. It looks to me as though the small or ordinary purchaser of honey is going to be left in the background. We in New York State have joint organizations which take in anybody, and make a State organization. He states a capital of $50,000; the minimum amount of each share is $100. Suppose, as we have in the United States, in a great many sections ,people that have no kind of organization, they belong to this National Association and nothing else, now where is this $100 share coming from? There is no man in an ordinary way keeping bees but does his little local trade. In my case I get a little more for my honey. Suppose they find out I am getting more for my honey in my section, and suppose this organization you propose to form finds that out, I have either got to put in the $100 or else stay outside. They are liable to rush in on my market, and flood me, so that I will be obliged to take the lower price along with the "common cattle." I would like to have a little enlightenment on this matter. Is this $100 coming from our county or State organization, or where? I am not willing to trot after the band-wagon. If you can't be a bell-cow don't be any.

Mr. Dadant—The suggestion I made was especially in regard to giving prices as guides. I realize the fact that California and the East are entirely different. In California there are large purchasers. Sometimes one man will furnish several car-loads, or two men get together and furnish the car-load, and this matter of organization is much more important to them. But if there is a central organization branching out, you would be very glad to write to them to find out what honey is selling for, and that they are setting the price of honey. If you who deal in a small way in honey can find out honey is selling for more than you are getting you certainly will raise the price. If you have a central organization which says, We will set the price at so much—it should not be too much—and they tell you ahead what the price will be, it will be a good thing; but if you are blindfolded you will be at a disadvantage.

Mr. Abbott—I understand the paper to mean just what Mr. York thought. I thought Mr. Brown meant that there was a combination of honey buyers and I wanted to know about that. Another thing Mr. Brown misunderstood, I do not object to discussing this question here, or to giving out prices or anything, but the thing I objected to was the formation of that committee here. I have no objection to Mr. Brown saying we all want to organize, and then organize the whole Association if you want to into a company of that kind. I was not opposing that. I simply wanted it understood I didn't want this National Association to appoint the committee to make another organization. The discussion is on whether this committee shall be appointed or not appointed.

Mr. Pressler—Is this committee to be the permanent committee?

Pres. Harris—No, simply to report back ways and means.

Mr. Pressler—There is no reason why this committee should not be appointed.

The President put the motion to appoint the committee, which on a vote having been taken was declared carried.

(Continued next week.)

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get them subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.

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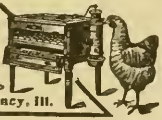

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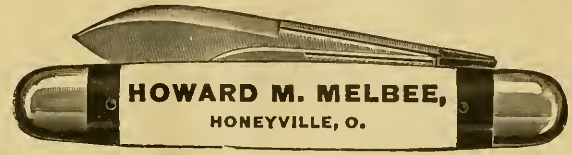

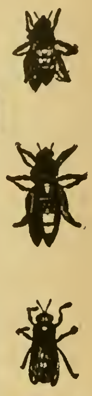

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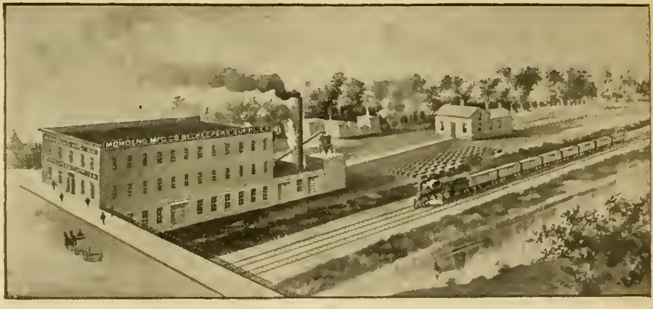
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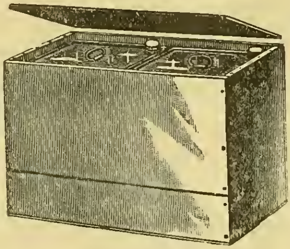

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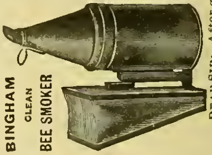

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Honey and Beeswax

CHICAGO, Dec. 7.—The market is well supplied with all kinds of honey; the demand is of a light nature. Fancy comb honey brings 14c, but quality as well as appearance is necessary; No. 1 sells at 12½@13c; off grades difficult to move at 1@3c less. Extracted, choice white, 7@7½c; amber, 6@7c, with off grades about 5½c per pound. Beeswax, 30c.

R. A. BURNETT & CO.

NEW YORK, Dec. 7.—Receipts of late have been quite heavy, and while there has been a fair demand, it has not been up to former years and stocks are somewhat accumulating, consequently prices show a tendency to decline, and in large lots quotation prices as a rule are shaded. We quote fancy white at 14@15c; No. 1 white at 12@13c; amber, 11c; buckwheat, 10c. Extracted in fair demand at 6@6½c for white clover; 5½c for buckwheat; 50@60c per gallon for Southern, according to quality. Beeswax firm at from 28@29c.

HILDRETH & SEGELKEN.

PHILADELPHIA, Dec. 24.—As usual around the holidays, there is not much call for either comb or extracted honey. Prices remain about the same as the last quotations. Some odd lots having arrived in the market in the last 10 days has weakened the price of lower grades. Fancy white comb, 15@16 cents; No. 1, 13@14c; amber, 11@12c. Extracted, white, 7@8c; amber, 6@7c. Beeswax, 26c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

BOSTON, Nov. 19.—Recent heavy arrivals together with very low quotations from some other markets have had a tendency to weaken our market. We quote fancy No. 1, 15@16c; No. 2, 14c, with ample stocks; absolutely no call for buckwheat. Extracted honey, 6@8c.

BLAKE, SCOTT & LEE.

CINCINNATI, Dec. 10.—The demand for honey at the present time is not good, owing to the approach of the holidays, when too many sweets are found on the market. On the other hand. the trade is well supplied with comb honey, that will require a considerable length of time to be consumed. We are offering white clover extracted honey in barrels and cans at 6½@8½ cents; amber, 5¾@6½c. Fancy comb honey, 12½@14c. Beeswax, 29@30c.

THE FRED W. MUTH CO.

ALBANY, N.Y., Nov. 9.—The crop of honey is turning out to be larger than estimated, and prices are softening, favoring the buyer. We quote fancy white, 15c; A No. 1, 14c; No. 1, 13c; mixed, 11@12c; buckwheat, best, 13c; average run, 11@12c. Extracted, buckwheat, 6c; white clover, 6½c; mixed, 6c. Beeswax, 29@30c.

H. R. WRIGHT.

KANSAS CITY, Sept. 22.—Market on comb honey is quite active at $2.75 per case for fancy white stock. Extracted rather slow at 6½@7c. We look for the demand on extracted to pick up considerably with cooler weather. Beeswax in good demand at 30c per pound.

C. C. CLEMONS & CO.

CINCINNATI, O., Dec. 19.—Comb honey is now coming in more freely, and prices if anything have moderated a little. The sales made and prices obtained were for No. 1 fancy water-white comb, 12@13½c; single cases, 14c. Extracted is sold as follows: White clover, in barrels, 6½c; in cans, 7½@8c; amber, in barrels, 5¼@5½c; in cans, 6@6½c. Beeswax, 27c.

C. H. W. WEBER

SAN FRANCISCO, Dec. 14.—White comb. 1-lb. sections, 11½@12½c; amber, 9@11c. Extracted white, 6@6½ cents; light amber, 4½@5½c; amber, 3¾@4¼c; dark amber, 3@3½c. Beeswax, good to choice, light, 29@30c; dark, 27@28c.

The market is quiet. Stocks are not of large volume, either here or in the interior, but some of the principal holders are urging honey to sale. being desirous of effecting a clean-up at an early date.

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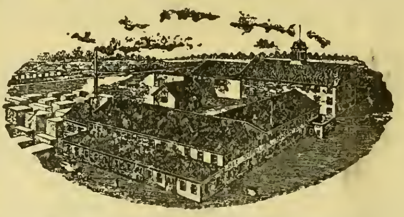

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